

# The Replicator:

On the Social Destruction of Fact through Replication as Art

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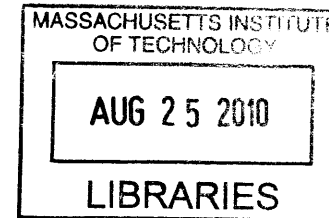
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by Haseeb Ahmed

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### Abstract:

In the context of art to replicate is to re-create and transpose an architectural space that is geographically or historically remote in a chosen site in the present. The replica binds itself to the original and creates a register for continuity and change across vast expanses. The existent world is used to produce its mirror image; those who see themselves in the original must confront their own image. In the practice of Replication an artist invests nearly all of her artistic freedom in a single decision: what should be reproduced in the present so that it may continue into the future? Together the Replicators proclaim "The World has already been Made!" but what then delays utopia?

In the last two years we have seen a massive upsurge in the use of replication as a strategy to produce meaning. Of these works I have chosen three: Yael Bartana's *Wall and Tower* (2009), Laurent Grasso's *HAARP* (2009), and Daniel G. Baird's *Soyuz/Progress* (2008), that demonstrate a multiplicity of historical and technological concerns that are the inevitably object of replication.

Replication belongs first and foremost to the scientific method as fact is only fact insofar as it can be reproduced anywhere in the world at any time.

My contribution treats the technical institute of MIT as a site for the production of meaning instead of as a site for the production of reproducible technical knowledge. My works *Shamshir+Windtunnel=Progress* (2008-09), *Daedalus: Holding Problem/Problem* (2010), and the two part project *The Sun Sets at Teufelsberg* (2009) and *Remote Viewing: Teufelsberg* (2010) seek to sustain and inhabit the space of translation between the original object and its replica.

This thesis consists of in-depth studies of works by my contemporaries together with my own installations. Lastly I chart a path through art history beginning in 1968 that leads up to the development of the strategy of Replication in contemporary art in the present.

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## Introduction:

Out of the murky collapse of disciplinary and media boundaries in contemporary art we see the emergence of artists who insist on pointing backwards towards the world that once was and no longer is. These artists are the Replicators and they invest all of their freedom in a single decision: what, of the past, should be chosen for replication in the present?

What was once forgotten appears in an instant before our eyes. In the last two years we have seen Daniel G. Baird evade atmospheric friction to materialize a Russian Soyuz space capsule and the International Space Station, albeit much degraded. Yael Bartana's *Wall and Tower* brings forth a Homa Umigdal fortified Zionist Settlement from 1936 in the site of the former Warsaw Ghetto only now appearing without its housing barracks, while Laurent Grasso's *HAARP* shares its name and form with a secret ionospheric U.S. Military outpost in Alaska. I myself am a replicator and to this list I can add the replication of the Tomb of Zumurrad Khatun North of Baghdad, Iraq in Chicago, IL. and the Teufelsberg Radar Station in Berlin, Germany. There are more replicators and replications coming into being in the world, and more yet to come.

At the sudden emergence of this practice I would like to interrogate how these products, which insist only on pointing towards the past, elaborate on the future of form of social life.

By restricting themselves to material that already exists in the world the Replicators forsake the new in their own production. Instead, they exclaim 'The world has already been created!' but what then delays the utopia of free production? This question is asked from the standpoint of artistic production, the only instance 'free production' existent today, albeit in a truncated form. At the most basic level, the ability to replicate any object or place in existence asserts that it is not a matter of material distribution that holds utopia at bay.

In science fiction a machine called a replicator allows for the free configuration of matter into any form imaginable, edible or structural. In the television series *Star Trek* it is the sole technological advancement that has eliminated all material poverty for humanity while on *Stargate SG1* it is the 'replicators', a species of robotic life, that proliferate endlessly to threaten the universe itself. The theme of, replication occupies science fiction to the extent that in the 1982 film *Blade Runner*, a humanity was depicted that must employ a solitary soldier, Deckard, to seek out and destroy the human-like 'replicants' that dare to return to Earth, the place of their origin, only to reveal later that Deckard is himself a replicant without knowing it. In the context of art too, replication is a form of end game against a social life which appears to have lost all sense of historical trajectory.

Replication furnishes criteria for assessing change between the site of origination and the site of reception. The original and its replica are inextricably bound to one another and are mirror images of one another. The space between the two becomes a register for continuity and change.

The motive force of the Vanguard has not been sighted for nearly forty years and doubt about its ever existing is widespread. Today technological progress appears to be the exclusive form of progress. The imagination of technological progress is linear; it builds knowledge on top of itself. The usefulness of knowledge is ensured by the criteria of reproducibility as the basis of the

scientific method the preminent method of knowledge production today.

The general order of reproducibility has to be realized at the level of the particular, in a particular place at a particular time without damaging this general order. The technical institute has become the prototype for the seamless society that struggles to remain rational and not merely systemic. The Massachusetts Institute of Technology has been chosen, allowed itself to become, and exists for the development of new forms of organization and technical progress.

By implementing a program in art within the architecture department, MIT has grown to house its own critical reception. This began with the the Center for Advanced Visual Studies in 1968 then the Visual Arts Program where I have just completed two years of research-based art production. The work that I have produced at MIT attempts use it as a site for the production of meaning instead of the production of technical knowledge. The Institute has inadvertently produced the possibility for its own antithesis as aesthetic knowledge. The strategy of replication as an artistic practice allows for the social destruction of fact which constitutes the world-as-we-know-it, if only for the moment of encounter with the work of art as replica.

Reproducibility is the process by which facts are created. Reproducibility ensures the universality of knowledge produced in a laboratory. For something to be true in one laboratory it must be true in any laboratory that exists or will ever exist at any time. In this way reproducibility allows for the creation of knowledge that can be built upon towards greater technological progress. Knowledge created that cannot be made available for immediate use is, instead, non-knowledge. The production of non-knowledge is particular to art production and reveals the latent structure of instrumental reason.

In art, the replicators create exceptions to the apparently exclusive

agency of technological progress. They destroy the image of linear progression in society by encircling the present in the past. Encountering a replica we see it instilled with the motive force of the artist, it is alive and new, but it refers directly towards a remote point geographically distant or in the past. In this way it uses the privilege of free artistic production to exclaim 'The world has already been made!' In this way the future is cordoned off from being the direct realization of the past in the present. The past is cast as one massive anachronism and rendered as material available to construct a new world. The possibility of utopia is maintained but remains imageless. Everything in existence is brought to a standstill before a discriminating art audience as the slogan 'The World has Already Been Made!' is joined by the slogan 'Hands off the Future!'

The replica reveals that it is the process or reproduction that is constantly reproduced to make the world-as-we-know it, rather than mere consumer products. The artistic strategy of Replication presents the possibility of emancipation as lying in the apparatus of replication itself once freed from the scientific constraints of future usefulness by the immanent uselessness and meaningfulness of aesthetic production.

The sensory apparatus that is tested and affirmed by looking at a replica is unique. It moves faster than a representational image. Looking at a replica one is immediately transported to the site of its Other realization- the site of its origination. This transportation cannot be helped; it occurs even if one has never been to the site of origination.

The replica as art object functions as transporter. One is held in suspension between where one is and where the replica insists one is. In 1968 in the US Robert Smithson developed a form of land art that offered up a language 'non-site' and expanded this idea to include the possibility of 'non-journeys'. The same year his contemporaries in Brazil, Hélio Oiticica, Lygia Clark as the Neo-Concretists, developed artworks that operated

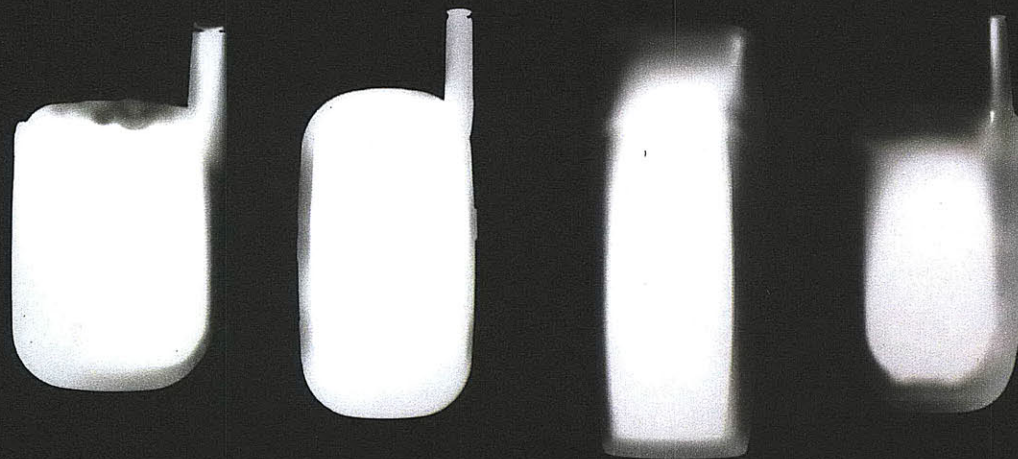
through a 'suprasensorial' apparatus. While Smithson allows for vast expanses of land to be traversed, the Neo-Concretists travel directly into the expanses of psychological spaces of an Other. Smithson and the Neo-Concretists produced these forms of art in response to very different sets of conditions. While Smithson points towards nothing less than an entropic universe, Clark and Oiticica point inwards over and against the totalitarian control of social space enforced by the Vargas military regime in power in Brazil at the time.

In both the Neo-Concretists and in Smithson we see the complete abandonment of symbolic metaphor. Meaning created in a metaphor was once enclosed entirely within a pictorial or literary form. Instead the structure of a metaphor is transposed onto the world itself. It is replaced by the physicality of experience expanded by the ability to anticipate experience and presuppose sensorial effects. Though one has never floated in outer-space, one knows what it must feel like, though one has never wielded a sword, one knows what it must feel like, though one has never stood atop a mountain's summit, one knows what it must be like and so on. Both Smithson and the Neo-Concretists operated out of a sense of immediacy and necessity to create a form of aesthetic experience adequate to the form of life as-we-know-it.

Today the practice of replication in art emerges as an attempt at mastery over a world that relies exclusively on technological progress operating anonymously and automatically. It begins with and departs from the scientific method in an attempt to 'cut it off at the pass'. Through the practice of replication the past is cast as one massive anachronism. It is as if one is walking down a hall, turns one's head to look back and sees the shape of the past, turning to continue on he finds that same shape appearing ahead of oneself. One is confronted with the necessity of making a decision; 'in what direction should we move now?' while none of the options are readily discernible from one another. At this point a real sense of where we are can begin to take hold, together with a sense of 'the real' as separate from the existent.

## ***Two Self Portraits***

**The Artist as Replicator / The Artist as Metaphysicist  
Haseeb Ahmed, 2008**



*Two Self-Portraits* (circa 2008)

Upon arriving at the Visual Arts Program at MIT I produced two self-portraits. Only at the point of completing my time here can I title and show them for the first time. The artist is always the first audience for his own work and sometimes, in the case of particular works or even particular artists, he remains the only audience.

The first self-portrait is now called *The Artist as Replicator*. It is a photogram of every cell phone I had ever owned up that point. Since that time two more phones can be added to this image.



The second self-portrait is now called *The Artist as Metaphysicist*.

Both are crude images.

The Replicator understands the world to constantly expand from a single archetype or gene. The present can be measured by the accumulation of the past and is the sum of it. At the same time the Metaphysicist understands the world to be self-evident and 'everything around us proves it to be so.

What happens when that evidence is completely misunderstood – almost as a matter of pathology? This is not to say that the objects

of attraction for the Metaphysicist or the Replicator aren't real. On the contrary, both are very much the same insofar as they are occupied only with taking account of the world through its remnant products.

Both the Metaphysicist and the Replicator are perfectly rational;





these objects the world has produced anonymously appear to be natural effects.

Imagine 'If the Metaphysicist or the Replicator is no longer burdened with evidencing their existence in the world around them then they can proceed to fashion the world in their own image.' Method takes command.





No longer concerned with proving their existence through material evidence the world is realized as truly the accumulation of the past, in the case of the Replicator, or the materialization of a priori principles of the Metaphysicist. This co-existential world would appear as a mirror and immediately its doppelganger would come into view. All that could see their double would shudder at its appearance and try and vigorously shake loose what had seemed to be the due course of nature.'



A scenario for the population of Boston this would mean seeing the Citgo Sign duplicated instantly on the opposite side of the river in Cambridge. The sign that appeared at the whim of Hugo Chavez, Citgo's then CEO, had accumulated heartfelt recognition and acceptance as the symbol of the city and the ubiquitous form of the triangle could house it all. The instantaneous duplication betrayed this collective recognition because this love was able to grow on the assumption that there were no others like it.

This is an artwork that acts on the basis of assumed evidence. The artwork is made out of anticipation for a future state the evidence collected by both the Metaphysicist and the Replicator points towards.

## **Means of Replication:**

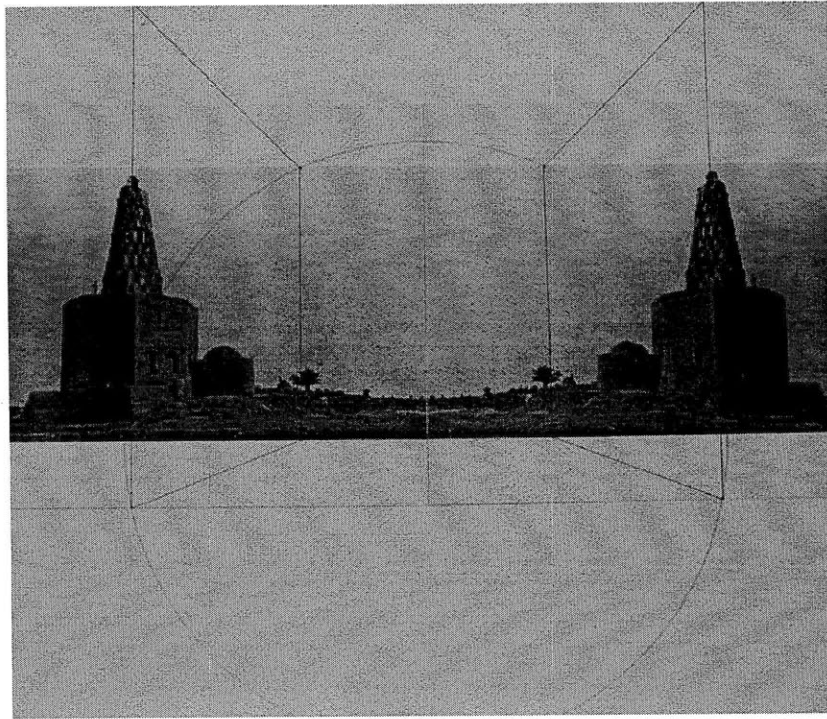
### **Fixed Perspective, Antennas, the Eclipse, and Interrogation Rooms**

The replicator eclipses its soul mate.  
It is love at first sight.

Replication today connotes the endless proliferation of things derived from a single archetype. Our contemporary imagination is supported by the emergent possibilities of cloning and stem cell research developed in biology. The sense of overwhelming accumulation has its precursor in the possibilities presented by mechanical production. However, the root meaning of the word replication does not necessitate a forward moving narrative from less to more. The root of replication is *plico* that means to fold, to lay or wind together, to fold up, or double up. Replication in this sense implies something very different as it implies a multitude that is part of a whole and that this whole encompasses all of its iterations. Replication contains within it these two antithetical possibilities.

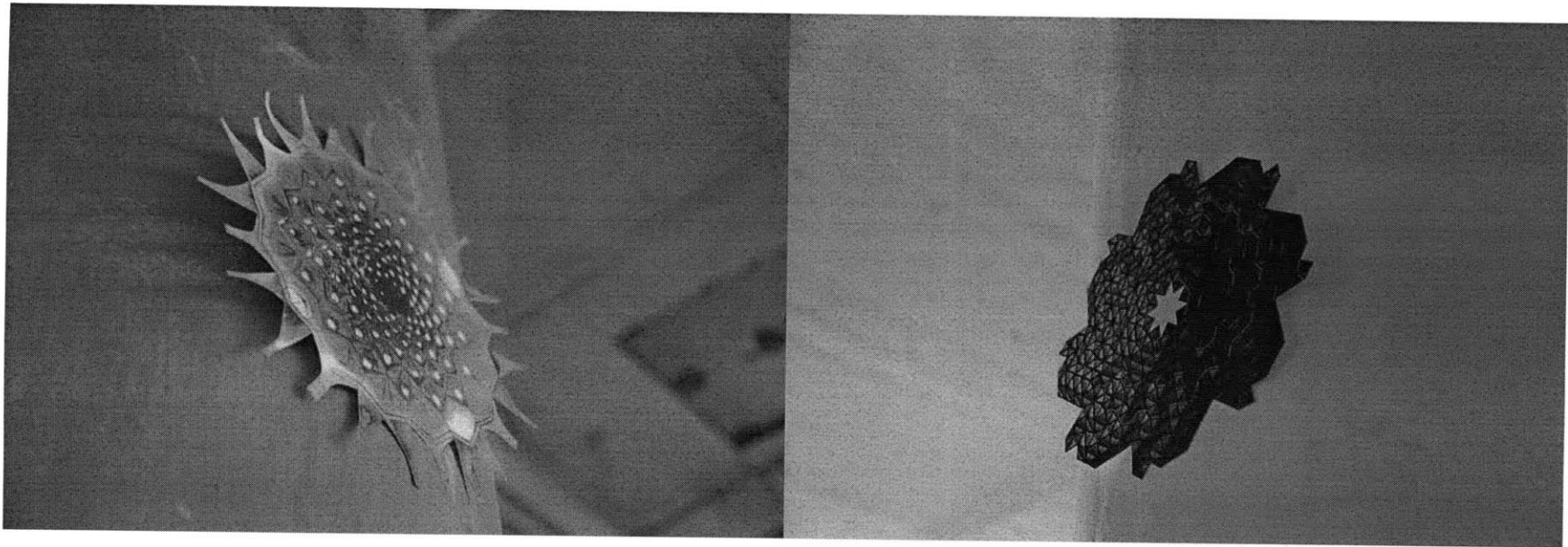
Replication as an art practice follows the latter form of the fold. To replicate in the context of art is to create a place that is temporally or geographically remote in another place at another time.





*Doppelganger/Perspective Study for Tomb of Zumurrad Khatun (Inverted), 2009.*

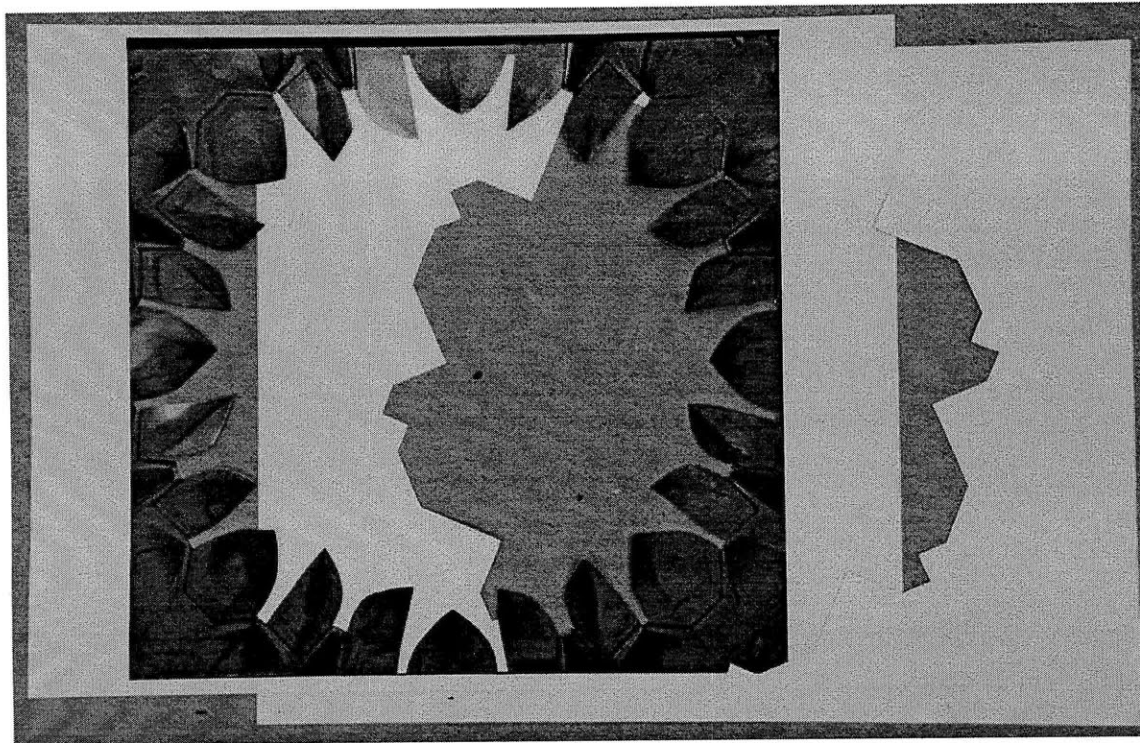
The moment in which the exact duplicate comes into existence so does the goal of replication. The past is immediately superimposed onto the present and in turn the past is cast as one massive anachronism. The only thing that remains constant is the fixed vantage point of the viewer.



*Tuned Antennas Study for Tomb of Zumurrad Khatun (Inverted), 2009.*

The replica and the original object existing somewhere in space, become antennas tuned only to each other's frequency. It is the three-part relationship between the original, the replica, and the implicit connection between the two as completed at the site of reception – that composes the work of art.

In this brief moment the replicated object and the original object eclipse one another. The entire world of experience and physics are suspended. Gravity, the accumulation of sediment, aging – they are all put on hold and now a narrative derived from the sheer association of forms arises.



*Eclipse Study, Tomb of Zumurrad Khatun (Inverted), 2009.*

Once physical reality is suspended it can be manipulated. The artist as replicator uses the dimensions of historical time and geographic space to specify his object of critique. The works of Daniel G. Baird's *Soyuz/Progress*, Yael Bartana's *Wall and Tower*, and Laurent Grasso's *HAARP* are concerned with very different tendencies in mass culture. Each of these artists take on technological domination, persistence of historical tendencies, and the exhaustion of sense perception to come to terms with physical reality.

Every commodity form is created under the pretense of wish fulfillment or necessity. In this sense each form is propelled by

a telos imbued to it in the process of production. Works of mass culture, unlike works of art, resist the discovery of the intention of their existence. Instead they operate under the pretense of implicit meaning. They exist so there must be a reason they exist and that is all.

This 'latent telos', without elevation to the level of ideology, is left to perpetual motion until a greater or equal force acts on it-changing its course. In the form of a replica, this force appears to be, in fact, its own self, coming from the symmetrically opposite trajectory. The object explodes from the sum of its parts. This process is similar to that of atom smashing.



The artist as replicator invests all of her labor in making something that should not exist, but which already does exist, somewhere else in the world. The fact of existence that belonged only to one object must share its reason for being in the world with its duplicate from now on, or till death do they part.

In this coupling, the original object is transfigured from a unique product of its historical condition into a blueprint for endless propagation. Before the labor is invested to spread the original object to potentially anyplace, regardless of context as a 'blueprint', the investor would come forward and ask 'for what reason would we want to create more of this thing?'

Entire cities are built on the model of a single architectural typology. At this scale the motive often times remains anonymous. However, in the case of an art object the investor is the artist and it is his own labor time that he invests. The artist as replicator asks himself, out loud and for all to hear, 'for what reason would I want to create more of this thing?' However, he goes a step further and asks 'what rationality produced this thing in the first place?'

In proceeding to replicate the chosen thing the artist does not offer an answer to these questions. Rather in stating the questions, presented in the form of the thing as it was, invested with all of the labor of the past that brought the original into being and all of the labor power of the present that brings its duplicate into being, the artist provides an expansive stage for the pathology of anonymous movement that produces the world as we know it. It is precisely the task of calling this motive to show itself that interests the artist as replicator is interested in.

In creating an identical object the replica emphatically insists on the non-identity between the world we hope to exist and the world that exists. By creating a direct link between the original and the replica it appears as if the historical subject is the audience of the work however, the historical subject is the object. This is what is the meaning of 'the past is cast as one massive anachronism'. This

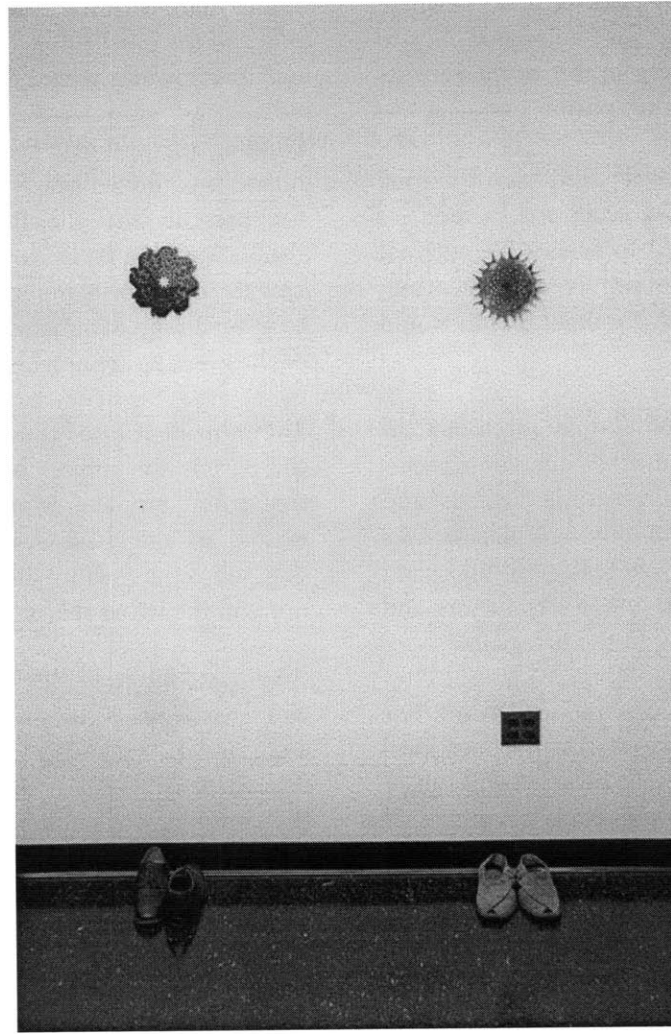
anachronism proceeds to include the present moment the living share; share with the living and with the dead or they are cast as one and the same thing. The dead were once living and the living will die, however what has yet to occur has not yet occurred.

Binding the past and the present together in a single form the future is cordoned off. The linear continuity of the past through the present into the future is thwarted in the moment of confronting the replicated artwork. The door for consideration of new forms of social life is opened as other than the forms created by anonymous, automatic, and alienated production, though trace of these forms are nowhere to be seen in the artwork itself.

The non-identity of the future from the present together with the past is the subject of works of replication. The practice of replication produces work for a subject that supposedly once existed, no longer exists, so that it will exist once again. But when that subject arrives it will not be recognizable to the once living nor will the living subject be able to recognize the dead.

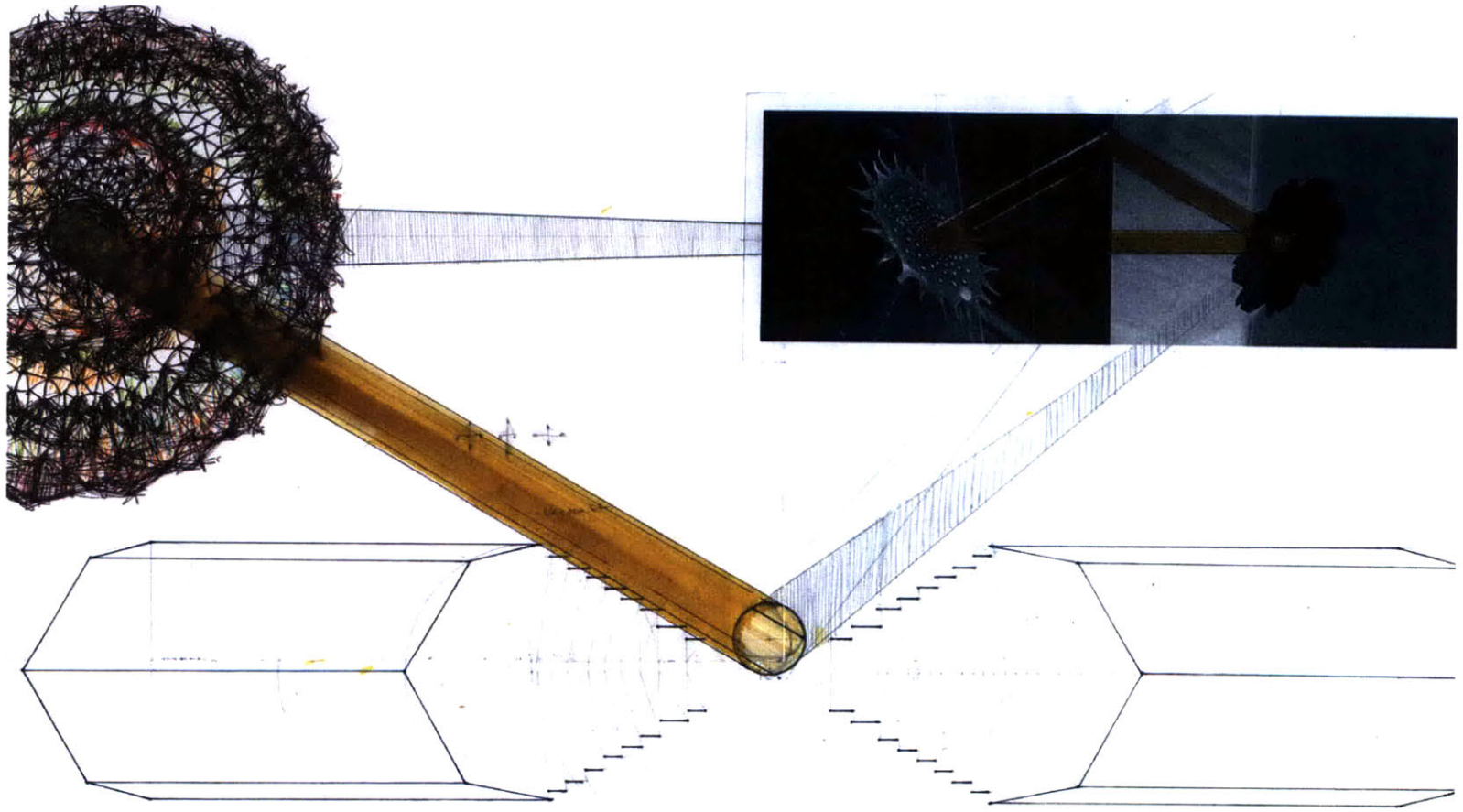
Anthropology imagines that the world will eventually become one massive excavation site. Anthropologists are especially preoccupied with sites of refuse, detritus, and waste as the discarded is without conscious organization. These sites are the truest record of diet, health, hygiene, economy, population density and so on. The Anthropologists never doubt the coming of the Excavator who will mine any and eventually all civilization with curious and alien eyes. In the meanwhile the Anthropologist works to methodically organize the world for his coming. However, the world has already produced Replicators and the fact of their existence gives proof that 'the world has already been made!' What more is needed then? Why hasn't the world shed itself at the sheer sight of the redundancy of its formal life?

From the standpoint of the created world *Soyuz/Progress*, *Wall and Tower*, *Tomb of Zumurrad Khathun (Inverted)*, and *HAARP* interrogate the cathectic character of social life. The work of the



*Interrogation Room Study, Tomb of Zumurrad Khatun (Inverted), 2009.*

Replicators link vast expanses of time and geographical distance to create a space in between the signified poles. This space can be occupied and is designed especially for this purpose; an interrogation room.



Study for *Tomb of Zumarrad Khatun (Inverted)* 2009



## ***The Replicators***

**Haseeb Ahmed**

***Tomb of Zumurrad Khatun (Inverted)***

**2008**

**Yael Bartana**

***Wall and Tower***

**2009**

**Daniel G. Baird**

***Soyuz/Progress***

**2008**

**Laurent Grasso**

***HAARP***

**2009**

### ***The Replicators Introduction:***

Replication has emerged as a strategy in contemporary art appearing as a discipline in its own right. To replicate is to retrieve and recreate a site that is historically or geographically remote in a different site in the present. Nearly all of the freedom of artistic production is invested in a single decision: what is the object of replication and what is the site of its reception? Each object furnished by the past is bound up with the conditions of its existence. The object of replication cannot be disentangled from the world around it that brought it into being nor can the original object be separated from its replica once it is created.

The Replicators have never before been brought together under this heading and this is in part because the work that they are creating is very recent. Though there is a surge of replicas and replicators I have selected the works *Wall and Tower* (2009) by Yael Bartana, *HAARP* (2009) by Laurent Grasso, and Daniel G. Baird's *Soyuz/Progress* (2008). To this list I will add the work that brought me to consider replication as an artistic practice *The Tomb of Zummurad Khatun, (Inverted)* from 2008 and more recently a project that takes the abandoned Teufelsberg radar station in Berlin, Germany as its object of replication. The Teufelsberg series takes two distinct forms: *The Sun Sets at Teufelsberg* (2009) is a site-specific installation aimed at preserving the deteriorating

the American Cold-War military base while *Remote Viewing: Teufelsberg* (2010) attempts to replicate the Teufelsberg radar tower at its site of production, the Massachusetts Institute of Technology.

In the practice of replication only one rule must be considered. An object must be retrieved from its remote site and reproduced exactly in its new site of reception. The most orthodox forms of artistic replication follow to the laws of historical preservation in architecture. The only thing that can change when replicating an object is scale so that the object might accord more harmoniously with its site of reception. Each work of Replication has a triadic structure negotiating the site of reception, the site of production, and the site of origination. These sites all factor differently in each work and the relationship between the three sites is treated in different ways as material for the composition an artwork by each artist.

There are however degrees of realization the rule of replication. My work has essentially the same structure as the strictest replicators. However, my emphasis is on the products and process of translation. The nuances of translation are thrown into relief by the background of strict replication. However, as we will see each of these artists maneuver the total weight of the original together with its replica towards a chosen end, an object of critique that extends beyond the work and motivates the artist in his or her practice.

Each of these artists explore ways in which history and the social context of artistic production tasks the present, as represented and enacted through architectural sites. The strategy of replication is essentially one of retrieval. Forgotten sites or sites fully assimilated into mainstream narratives are retrieved for recreation in the present. The invocation of the past must be considered together with the will to mobilize social and technical infrastructures needed to replicate these places in the present. The strategy of replication is motivated by a drive towards a mastery over narratives that dominate the present and determine

the future. These narratives can take the form of compulsive reproduction of the past in the present, as in Yael Bartana's work, or as narratives of automatic technological progress that appear to operate without social interest, as in Laurent Grasso's *HAARP*.

In the book *the Future of Nostalgia*<sup>3</sup> Svetlana Boym states that "Nostalgia is not a passive emotion but a way to alternative thinking." (Boym 34) In this context nostalgia is the longing for an object in past can never be recreated as it once was. Rather, the attempt to recreate this object is a desire that describes the state of the present and the longing for alternative one.

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<sup>3</sup> Boym, Svetlana. *The Future of Nostalgia*. Basic Books: 2002.

What is the role of Translation in Replication?

## ***Tomb of Zumurrud Khatun (Inverted)***

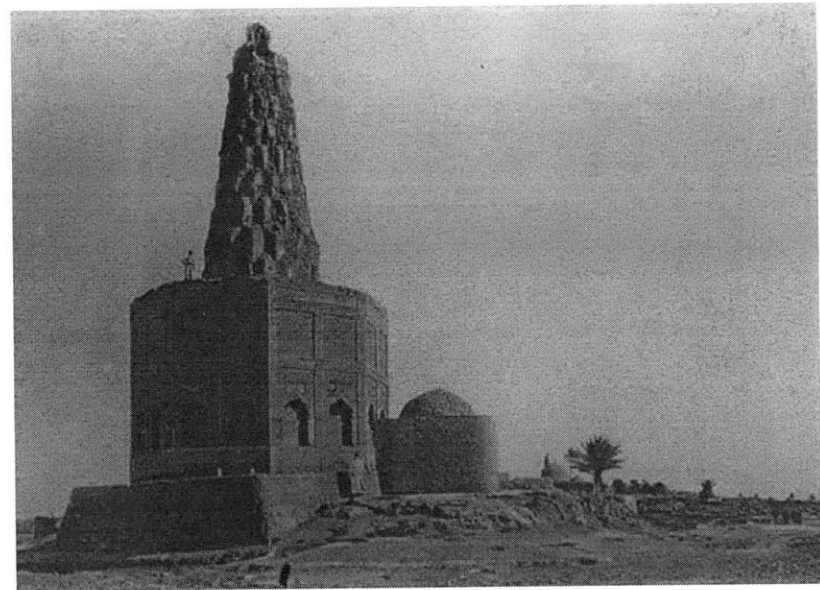
**Haseeb Ahmed**  
**Chicago, IL. 2008**

The first project I would like to present is my own. It was created in 2008 and exhibited in the G2 Gallery in Chicago, IL. This project takes the Tomb of Zumurrud Khatun as its object of replication. However, I created this project before I had arrived at the category of replication as an artistic practice and produced this work largely unaware of other artists working in this way. This is with the exception of artist Daniel G. Baird, a fellow student at the School of the Art Institute of Chicago and collaborator over these last few years. His project project *Soyuz/Progress* is included below among the Replicators and was produced concurrently with the installation *Tomb of Zumurrud Khatun (Inverted)* discussed below.



## What is the Object of Replication?

The Tomb of Zumurrud Khatun was created in c. 1013 a.d. in Iraq just north of Baghdad. It is the first building known to use muqarnas blocks, a system of ornament that is both tectonic and decorative. The history of Islamic art is one of complex appropriation from preceding and neighboring cultures. Muqarnas are believed to be the only completely original architectural invention furnished early Islamic civilization<sup>3</sup>. The impetus for the creation of muqarnas ornament has been ascribed to a shift in the conception of the cosmos from a world dominated by a single embodied entity to a conception of the cosmos as an atomized field of monads held together by an abstract unifying force<sup>4</sup>. Prior to the invention of muqarnas domes the conception of God was articulated by the Byzantine hypostyle dome. It was formed by a single key stone holding together a series of interlocking arches. In the Muqarnas dome every block functions as a key stone and each block distributes the load throughout the entire structure evenly. The Tomb of Zumurrud Khatun is seen here before the implementation of a British conservation project in 1923.

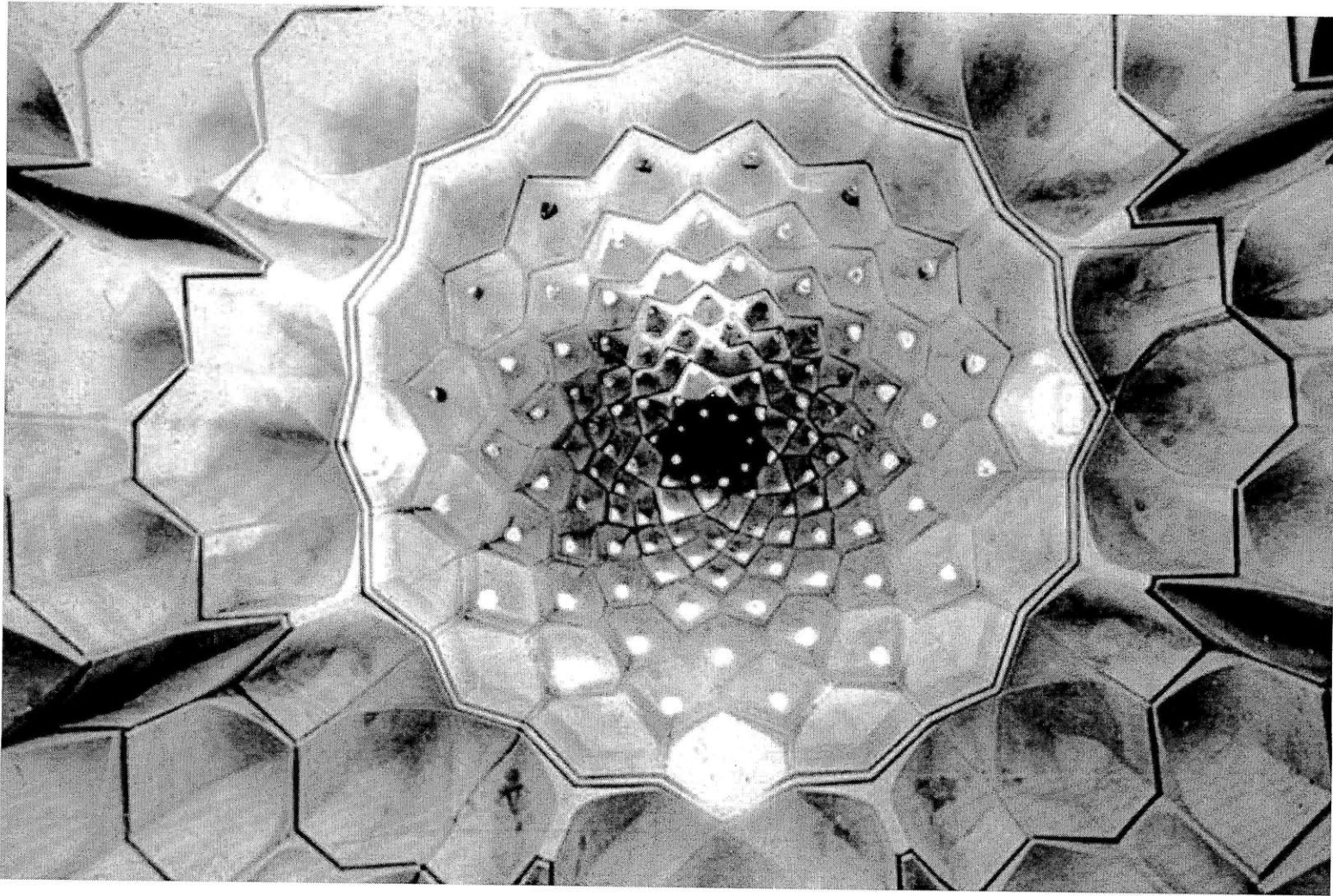


Tomb of Zumurrud Khatun, Baghdad, Iraq, before preservation (Image source: Ernst Herzfeld, Plate L, 1903).

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3 Grabar, Oleg. *The Formation of Islamic Art*. New Haven: Yale University Press. 1987

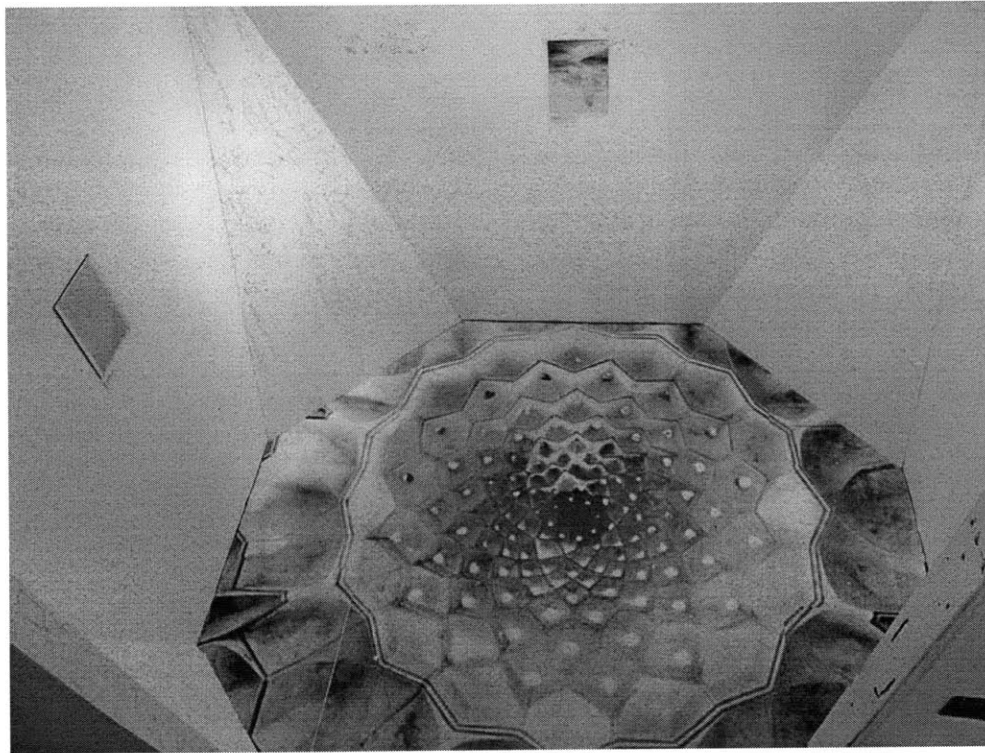
4 Akkach, Samer. *Cosmology and Architecture in Premodern Islam*. Albany: SUNY Press. 2005



Interior view of muqarnas dome at the Tomb of Zumurrad Khatun, Baghdad, Iraq<sup>3</sup>.

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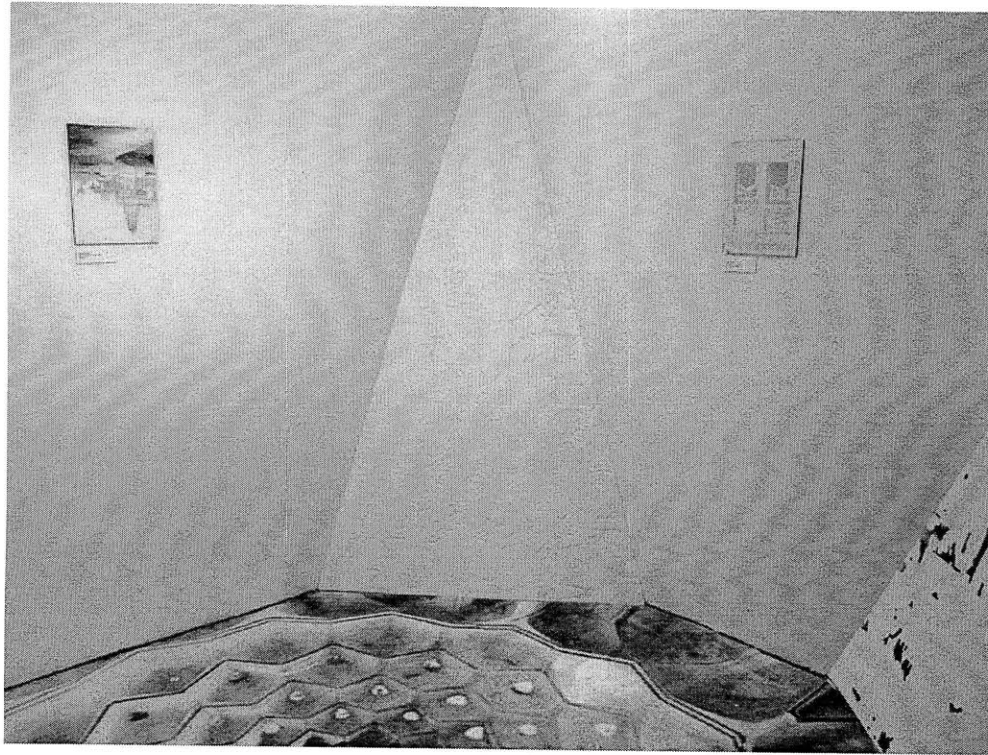
3 Yasser Tabbaa, IRQ0169, 1980, "Visions of Iraq: Topography and Historical Monuments." 6 July. 2010 <[http://archnet.org/library/images/one-image.jsp?location\\_id=1408&image\\_id=64974](http://archnet.org/library/images/one-image.jsp?location_id=1408&image_id=64974)>



Elevated view of *The Tomb of Zumurrad Khatun (Inverted)*, 2008.

This project is not concerned with a direct replication of the site of origination and the site of reception. It is an exploration of the necessary steps that must be taken to replicate with limited information. I created this project because I had never stepped inside of a muqarnas dome after two years of attempting to resurrect this craft tradition. Using the state-of-the-art digital fabrication tools I gathered up all of the fragments of the tomb I could find. These fragments were mediated to me through books and on the internet. An additional layer of mediation was introduced by the processes of production entailed in digital fabrication itself, especially when considered in relation to 11th-century craft production.

This project is an exploration in translation. It explores how things are transformed in the act of transference from one place to another and the lengths that one must go to to re-inscribe the original into the new. Transformed in the translation between the site of its origination and the site of its reception, the tomb emerged from the digital wormhole upside down. The dome that would hover overhead fell below my feet.



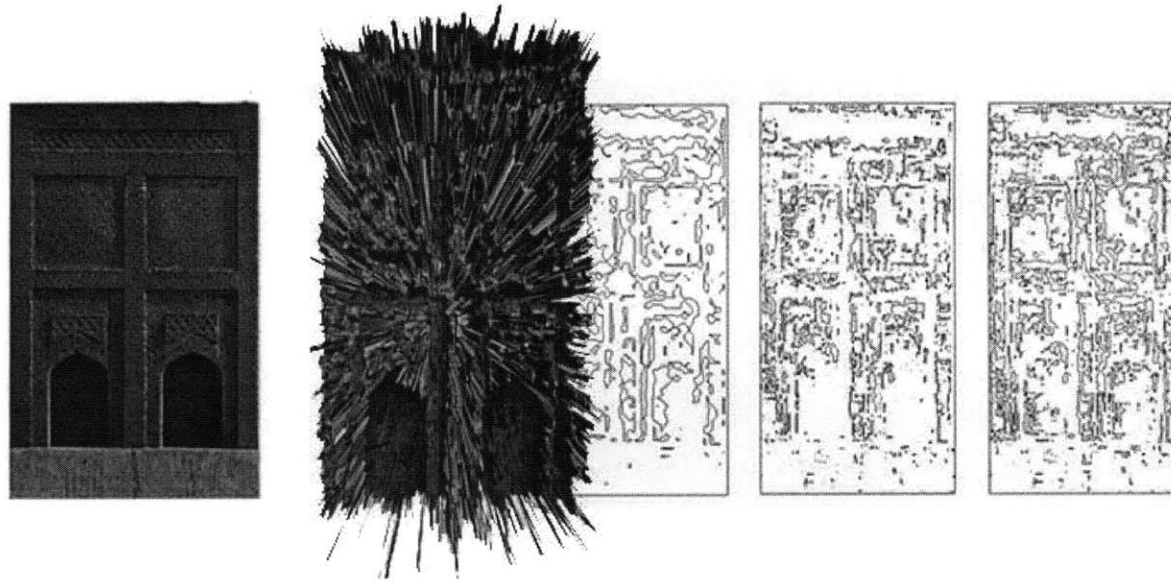
Standing view of *Tomb of Zumurrad Khatun (Inverted)*, 2008.

By reconciling photographs, sketches, plans, and travel accounts in the 3D environment of virtual space, I was able to output the consolidated form directly using prototyping machines. Specifically, I used CNC routers (Numerically Controlled fabrication) to inscribe the traces of the arched foundation, a large-format inkjet printer to map the dome directly onto the floor, and laser cutters to burn photographs over graphite drawings of a site that I had never visited.

The rationality embedded in each of these machines is idiosyncratic. The algorithms in each digital fabrication tool

interprets virtual three-dimensional form in a different way. The machine is responsible for deriving the order of cuts made and the additive and subtractive steps necessary to arrive at a final likeness of the virtual three dimensional object. However, the original tomb was produced using 11th-century rammed earth techniques. In the process of fabricating this installation a machine rationality interpreted and was superimposed onto traditional craft techniques. Bricks were translated into pixels, pixels into vector lines, and vector lines to engravings. Each shift was a shift in material and digital platforms abided by a mathematical regularity. This machine rationality was attempting



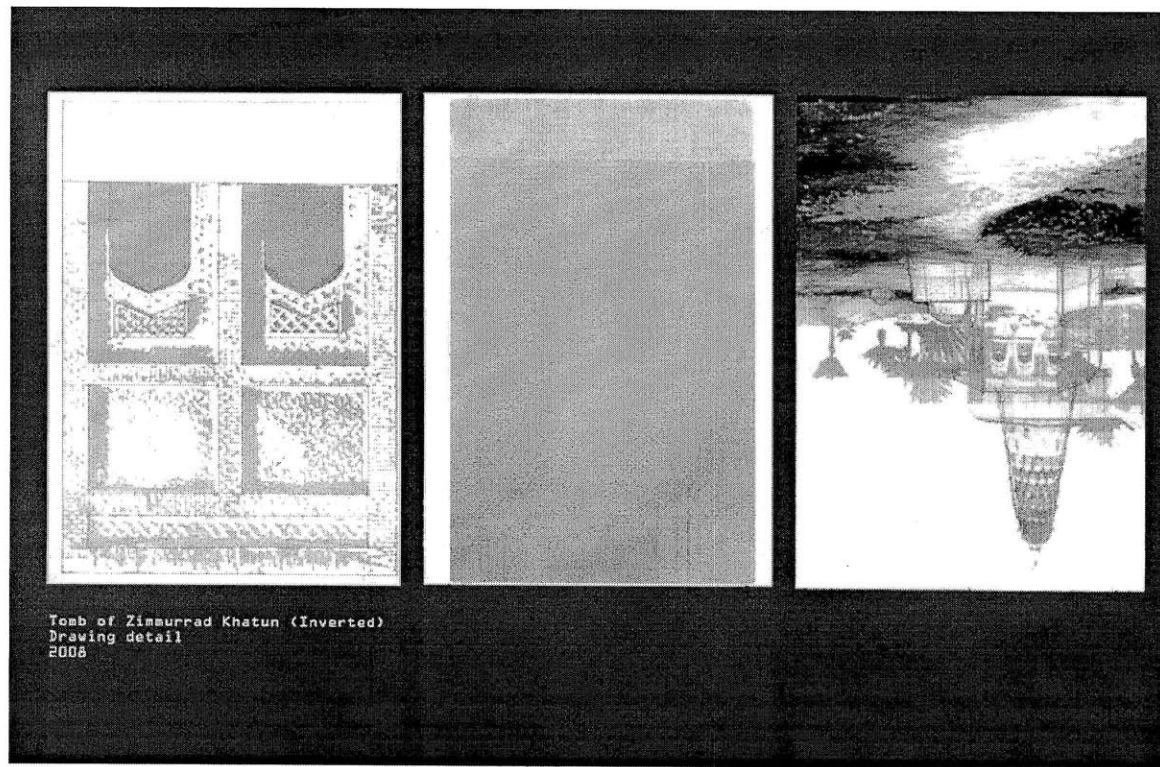


3-D color mapping and vector traces for *Tomb of Zumurrad Khatun (Inverted)*, 2008.

to produce an object that had no relationship to that form of rationality. The end result is the record of these mediations.

In order to gather the final phase of data that could be translated into machinable routes it became necessary to explode the foundation of the building itself. A program designed to reconstruct a three dimensional objects out of two dimensional images failed to produce a structural form. Instead it blew out every element, however, by using a secondary process I was able to lay a substrate over this blast I was able to recover some of the traces of the form. This process is not unlike the silhouetted residual ash left on the surface of walls after a nuclear explosion.

The Tomb of Zumurrud was annihilated in virtual space so that it could be reproduced again in actual space.



Drawing Detail, Laser and Graphite, Tomb of Zumurrad Khatun (Inverted).

The installation included a set of drawings which were hung upside down to accord with the rest of the inverted tomb. These drawings entailed two steps in the process of production. The first was graphite drawings made as if they were drawn from memory – a memory that there was no way that I could have, but was allowed me from continual exposure of the study of the tomb. These drawings were then placed in a laser cutter to have select photographs of views that happened to match the tomb burned over them. At times the drawing was completely effaced by heat while, other drawings were later interpreted once again with graphite line drawings: The drawings served another function as well. They invited viewers to step into the installation and walk

over a dome whose surface appeared to recede into the floor. Everyone who entered proceeded with great caution.

The tomb was a cultural product over a thousand years old from thousands of miles away. There was no way for me to know what an immediate experience of the place would be like much less what the intended experience was. A major divide separated the present and the past- that of modernity. The form of subjectivity was completely different from then to now and yet it was literally possible to inhabit it in the form of its remnant architecture.

By creating a highly mediated but extremely rational replica of this architectural form I wanted to stand inside of the tomb and to know its tectonic details inside and out. However, more importantly, I wanted to know what it was that could not be re-inhabited; to feel the effect of a completely alien object and to open the possibility that what is familiar now could become alien as well. The ability to pursue this estrangement and its effect to the extent of built form could also engender the production of a whole range of intentional estrangements from the world as we know it.

Through the practice of replication, the *Tomb of Zumurrad Khatun (inverted)* in Chicago forms a direct link, like an umbilical cord, to the original Tomb of Zumurrad Khatun in Baghdad, Iraq. Circumventing one thousand years of craft development, historical time, and geographic distance – the replica in Chicago emerges with all of the material of the original but in a state that is not fully translated, upside down, yet intrinsically linked to its original.

**Does Replication rely on existent Historical Narratives?**

## ***Wall and Tower***

**Yael Bartana**

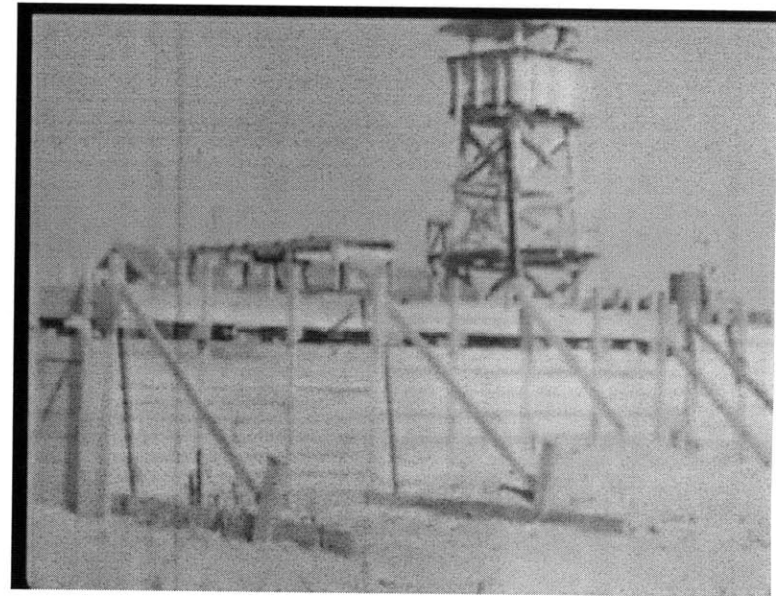
**Warsaw, Poland. 2009**

*Wall and Tower* is a work that takes multiple interrelated forms. In even parts it consists of the installation of an archetypal Homa Umigdal settlement at the site of the former Warsaw Ghetto, a video work which is broken into three sections, and a collective community effort that brought about the production of the piece.

Yael Bartana was born in Kfar-Yehozkel, Israel in 1970. She has exhibited work throughout Europe and the US and currently lives and works between Amsterdam, Holland and Tel-Aviv, Israel.



Bartana's project *Wall and Tower* entails the replication of a Homa Umigdal settlement at the site of the Warsaw Ghetto Uprising, 1944. The Homa Umigdal settlement was a form of Kibbutz sponsored by the Jewish National Fund (JNF) during the Arab Revolt from 1936-39 in what was then British-mandated Palestine. This form of settlement was often erected in only one night over lands recently purchased by by the JNF to prevent Palestinian farmers from cultivating it. They consisted of walls approximately 11 feet high and a set of long houses all centered around a wooden tower. Each of these Homa Umigdal settlements could communicate from tower to tower through a form of morse code.



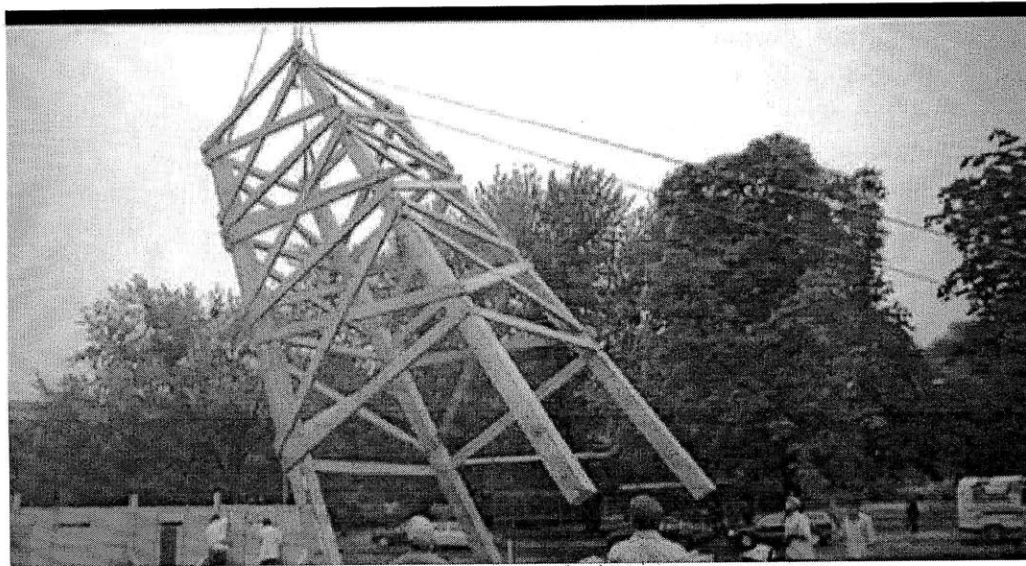
Film still from a Jewish National Fund Film depicting a Homa Umigdal settlement.

These settlements existed within an expanded network tied together through the narrative constructed by Zionist nationalism. Aside from funding the construction of the Homa Umigdal and transporting Eastern European Jews to settle them, the JNF also sponsored the creation of a series of propaganda films aimed at demonstrating the construction of a national identity for Eastern European Jews.

Bartana's replication of the Homa Umigdal settlement at the site of the Warsaw Ghetto Uprising moves far beyond the mere recreation of the structure. This project involved the creation of the Jewish Renaissance Movement in Poland, a fictional

organization dedicated to the invitation to resettle 3,300,000 Jews in Poland 75 years after the Nazi murder of roughly the same number of Jews on Polish soil.

Working with an existing Leftist group centered around the journal *Krytyka Polityczna*, Yael Bartana established the goals of this project "to think and rethink the polish Jewish drama, to overcome Israeli-Polish guilt and the Israeli-Palestinian conflict, and to propose utopian visions of homecoming<sup>3</sup>. It is not a realistic movement but rather sticks to mere history and the present to question, provoke, and disturb the mainstream Zionist narrative."<sup>4</sup>



Yael Bartana, *Mary Koszmary (Nightmares)*, a *Polish Trilogy*, 2009, film still.

3 Bartana, Yael. *Creative Time Summit: Revolutions in Public Practice*. Celest Bartos Theater of the New York Public Library New York City, NY. 24 October. 2009

4 Ibid.

Here Bartana is employing the strategy of replication in order to master a history that is as of yet unresolved and continues to reproduce itself in Poland, in Israel, and through history. The initial catastrophe of the Holocaust in Poland is directly connected to the catastrophe of the Israeli-Palestinian Conflict.

Bartana's attempt to "question, provoke, and disturb the mainstream Zionist narrative" is made most apparent in the video work *Mary Koszmary (Nightmares), a Polish Trilogy* that used the replicated Homa Umigdal settlement in Warsaw as a set. Here she appropriates directly the style of JNF

propaganda films made to promote the settlements and Jewish nationalism during the Arab Revolt. The opening scene of the trilogy features a speech by the supposed leader of the Jewish Renaissance Movement in Poland who is in reality a member of *Krytyka Polityczna*. Here he announces the open invitation of Jews back to Poland saying "Heal our wounds and we'll heal yours... and we will begin together again." He continues on to say that "This is a call not to the dead but to the living."<sup>5</sup>

By working with existing groups in Warsaw, Bartana's fictional proposition takes on the appearance of a practical solution. By proposing the open invitation of Jews to Poland as a homecoming



Yael Bartana, *Mary Koszmary (Nightmares), a Polish Trilogy*, 2009, film still.

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<sup>5</sup> Bartana, Yael. *Mary Koszmary (Nightmares), a Polish Trilogy*, 2009.

Bartana posits a kind of resolution to the catastrophe expanding from the geographic locations of Poland and Israel and throughout historical time. The appeal to the living and not the dead is a 'bringing full circle' of history. Bartana's work can also be considered as a folding of the past into the present (or vice versa) for the sake of the future. Bartana accords directly with the definition of replication whose root *plico* means to fold. Bartana runs counter to the popular understanding of replication which means to propagate a place, event, or thing endlessly into the future on the logic of what appears to be a linear chain of progress.

Bartana's selection of the site of the Warsaw Ghetto Uprising as the site of replication of the Homa Umigdal settlement demonstrates an insistence that a site is not only composed of physical space but is internally bound up with historical time as well. Through this site Bartana can create a continuation of the historical narrative, or events as they occurred, and the fictional narrative as communicated through Nazi and Zionist propaganda that motivated how these events played out. By continuing her project of replication into the a film that depicts the process of constructing the settlement she is able to commandeer the seemingly-static historical narrative towards the proposition of an alternative future. This however, would not be possible without



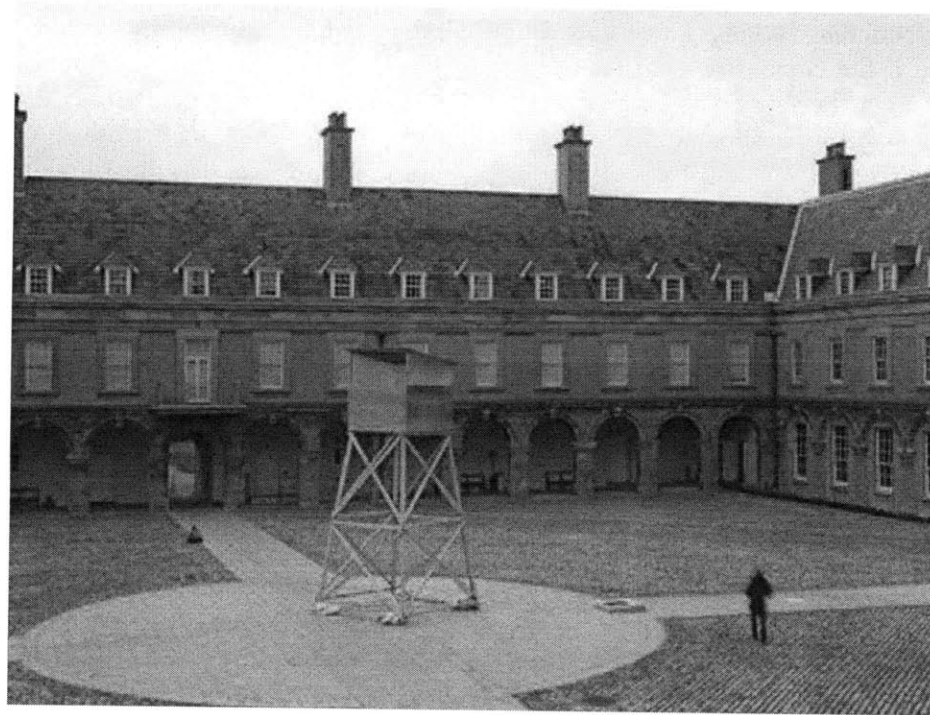
Yael Bartana, *Mary Koszmary (Nightmares)*, a *Polish Trilogy*, 2009, film still.

the site of reproduction being the the site of the Warsaw Ghetto Uprising where 13,000 Jewish resistance fighters lost their lives attempting to prevent the deportation of 50,000 inhabitants of the ghetto to the Treblinka concentration camp.

*What is the relationship between site and object in Replication?*

The importance of site in the practice of replication is demonstrated by a comparison of Yael Bartana's *Wall and Tower* (2009) to Mark Clare's project *Know Thyself* (2005). Both projects take the Homa Umigdal settlement as their object of replication. While Bartana replicates her settlement at the site of the Warsaw Ghetto Uprising, Mark Clare selects the IMMA in Dublin,

Ireland as his site of reception. Both artists are equally faithful to the archetypal form of the settlement down to the original materials used. However, the site of the IMMA, Dublin that Clare is attempting join with the original site as it exists in 1930's Palestine has very little connection with the motive forces of the JNF involved with the creation of the original. It is for this reason that Clare's *Know Thyself* forms a one-way communication with the history that he is working to invoke. Bartana's *Wall and Tower* is able to create a dialogue with the past so strong that she is able to hijack the conversation and 'put words in the mouth' of the JNF and Polish government by issuing an invitation for the return of 3,300,000 Jews to modern day Poland.



Mark Clare, *Know Thyself*, 2009, IMMA, Dublin, Ireland.

Furthermore, Clare only replicates the structure of the Homa Umigdal while Bartana replicates the structure, then uses it as a set for a film which entails reenacting the process of producing such a settlement, together with the stylistic form of JNF propaganda films. Clare is engaged with reproducing the material form of the object, however Bartana reproduces the means of production together with its product, the Homa Umigdal settlement. By reiterating this history she is able to inscribe the 'utopian wish of homecoming' into the form- an unfulfilled and impossible wish because of the 'mainstream Zionist narratives' that are her object of critique.

*What is the difference between the product and the process of production in Replication?*

It is the essential difference between drawing a line between past and present and bringing it full circle that separates Clare and Bartana's works of art, though they appear to be extremely similar at first sight. The strategy of replication works best not as a way to indict the dead but rather, it is most effective as a way of activating the remanent traces of the past as it continues to be reproduced in the present. To put it another way, Bartana is engaged in the reproduction (replication) of the means of production while Clare is simply engaged with reproducing a tangible product of production. This is what allows Bartana to move beyond the initial conditions of replication, the selection of an object and its faithful replication, to directing this object to confront its own point of origin.

In the essay *The Reproduction of the Conditions of Production*<sup>6</sup> Althusser follows Marx here in describing the underlying principles of capital by stating that it is necessary to "renew the means of production if production is to be possible at all."<sup>7</sup> This can be understood from the standpoint of the product, meaning the

machine used to make an object must be maintained and remain functional if it is to continue to produce this object through time. It can also be understood from the standpoint of the producer, meaning if production is to remain constant then it cannot be measured in the amount of things produced. Rather it can only be measured in the time spent by the producer, or worker while producing the commodity. The time spent by the worker becomes the actual variable in production and in this way the worker himself is the commodity traded. The worker through his time is in fact the actual commodity being exchanged and expended. The focus on the object of production is misleading in the sense that it often appears to point towards the thing produced. However, much production is engaged in the production of the means of production, for instance machinery is described by Marx as accumulated or dead labor in an object that continues to be productive for a duration after its initial moment of production.

The distinction between Bartana and Clare can be understood in these terms. While Clare's entire project rests on the reproduction of the the physical structure of the Homa Umigdal, regardless of site or consideration of its new programmatic function, Bartana reproduces the entire process of production together with the object of the Homa

Umigdal that appears to bind ideology and material reality together. She is able to make the object perform in a new way that is only a slightly distorted version of its designed purpose as a prop in JNF films. Bartana is able to break free of the threshold of Zionist propaganda, her eventual object of critique by using only the materials it furnishes to her.

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6 Althusser, Louis transcribed by Blunden, Andy. *Lenin and Philosophy and Other Essays*, Monthly Review Press, 1971.

7 Ibid. p. 47



**Can the Impossible be Replicated?**

## ***Soyuz/Progress***

**Daniel G. Baird  
Chicago, IL. 2008**

*Soyuz/Progress* is a work that replicates a scale model of a Russian Soyuz Space Capsule and anonymously leaves it under a rail road track in Chicago, IL. It differs from Bartana's *Wall and Tower* insofar as its object of replication is meant to operate beyond geographic coordinates. The site of reception of the space capsule could be anywhere on the planet, to which it is never supposed to return.

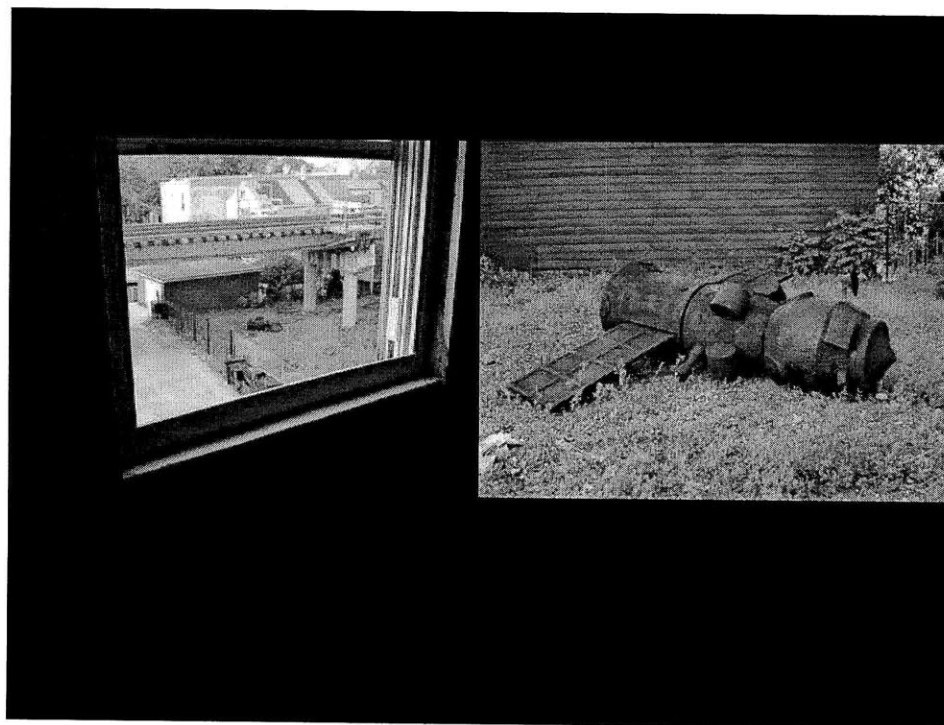
Daniel G. Baird was born in 1984 in New Jersey, US and is currently lives in works in Chicago, IL. He has exhibited throughout the U.S. The body of his work is an interrogation of the agency bound up and attributed to technological progress as seen through the lens of space travel and archeology.

Peering out of a window into an empty lot, under a section of elevated railroad track, next to red house—appears a Soyuz Space Capsule.

The capsule seems to be complete. All three parts are intact including the orbital module for cosmonaut habitation, the descent module made to bring those cosmonauts back to earth, and the instrumentation/propulsion module that contains the telemetry and radio services together with power supplies. Each of these sections would only be together in the moment of orbit and full operation.

The R-7 Rocket that would have carried it and its cargo into space is nowhere to be seen. This makes sense insofar as the rocket, after delivering its cargo beyond the mesosphere, is designed to disintegrate in the heat generated in over a 100 kilometers of falling back to Earth. However, if the rocket had disintegrated upon its return how could the capsule, in a state of orbit, be encountered here on the ground in Chicago, IL without also disappearing into dust?

The fact of the capsule's appearance cannot be denied. If the method of its vertical transportation involved a paranormal phenomenon then it existed only as long as the moment of



*Soyuz/Progress, Daniel G. Baird. Chicago, IL. 2008*



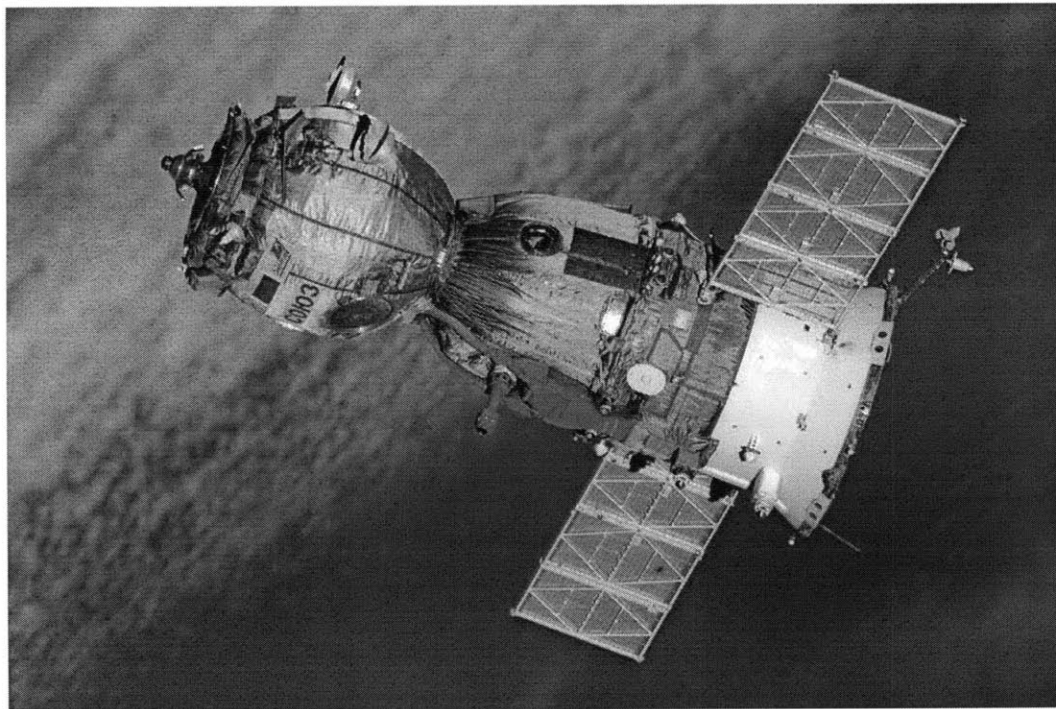
transportation itself. The capsule appears to be much degraded. Every inch of it is oxidized and encrusted with organic matter, something that could never have occurred in the vacuum of outer space. In outer space objects cannot age. Even after a man-made satellite has exhausted its functionality it remains in space unused and un-altered.

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#### *How is Time measured through Replication?*

The capsule has undergone a process of sedimentation. The geological process of sedimentation entails the carrying of particulate matter by wind or water to be deposited on the surface of land or at the bottom of a body of water, eventually to become consolidated into rock. Furthermore, the process of sedimentation can be measured to determine the age of the object. However this depends upon the atmospheric consistency of the



Soyuz Space Capsule, Image Source Unkown.

site in which the object or rock is found. Beyond 'normal' forms of sedimentation, catastrophic forms of sedimentation also exist. Catastrophic sedimentation includes exceptional occurrences like floods or nuclear explosions. Though the capsule departed from the earth, there are no earthly means of returning it to the earth and yet it exists.

While catastrophic circumstances can explain the existence of exceptional geological phenomenon they cannot account for objects that exist beyond the surface of the planet. The artwork is the product of a confluence of geological and the most advanced human production. Encountering the object in an empty lot, the anonymity of artistic production is confused with the anonymity of the institutional technical production of the highest order.

#### *Can Ghosts be Replicated?*

The Soyuz capsule as it is encountered in the empty lot is functionless. Its physical degradation eliminates the illusion that it still works while maintaining the possibility that it once did work. In this sense *Soyuz/Progress* is a ghost. The difference between it being a representation of a ghost and a ghost lies in the quality of anonymity of the experience of the object. There is no audience for this work except for those who happen to come across it. The object exists only as form at first glance and then is later identified deepening its mystery while contextualizing it.

#### *Does Replication rely on Testimonials?*

The initial anonymity of the object is extended to the anonymity of the individual who would encounter the object in the empty lot. In this sense the object is not recognized as an art object first and foremost if ever. Rather, the individual who would be a reflective viewer in an art gallery (for instance) can be elevated no higher than the status of witness, a witness subject to an unexplainable or paranormal phenomenon. Such a witness's sanity is always cast in doubt and the event is reduced to the insistence and will of the

witness alone, the event being contained completely within the moment of encounter. The witness is the exclusive appeal to the rational subject bound up in our total form of subjectivity.

#### *Is Replication a Form of Fata Morgana?*

Up until the 19th century sailors sighting a ship on the horizon that would grow no closer or farther and would appear to float just over the horizon would know it as the *Flying Dutchmen*. The actual *Flying Dutchmen* is believed to have wrecked off of the shores of the Cape of Good Hope, South Africa. However the precarious circumstances of the wreck and the danger incurred by anyone trying to sail the cape lead to a popular idea that the ship had wrecked because the ship's Captain, Captain Falkenberg, had lost a game of dice with the Devil, the wager being the captain's soul. For the sailors encountering the *Flying Dutchmen* the mere sight of it was a portent of doom. In the course of being shipwrecked seeing another ship on the horizon would have meant the hope of rescue by maintaining its function and nautical propriety. However, the order is reversed, seeing the *Flying Dutchmen* meant instead that a wreck was about to occur and could be anticipated. The paranormal phenomenon rested in the reversal of cause and effect relationships.

Today we know the *Flying Dutchmen* and similar phantom phenomena to be the product of a special kind of superior image or mirage called a fata morgana. A fata morgana is the product of an atmospheric refraction of light called looming. Light is made to bend with a thermal layer of air, arcing from the standpoint of the viewer to the position of the object viewed on the horizon. Fata Morgana is unique form of mirage insofar as it creates a duplicate image hovering above the actual object.



Albert Pinkham Ryder, *The Flying Dutchman*, 1896.



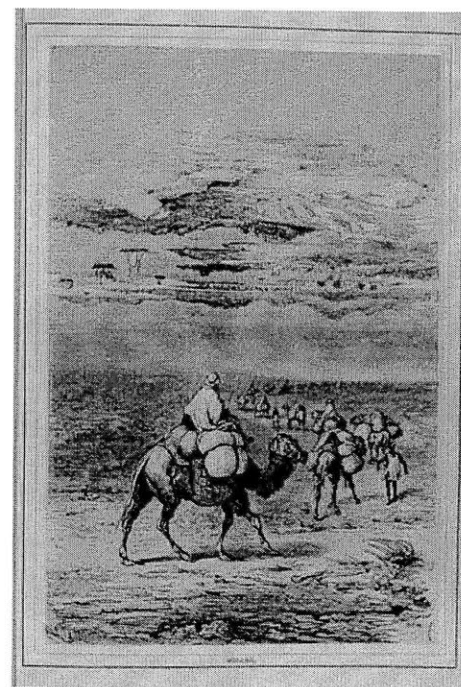
Disney's Dream Boat Cruise Ship docked with Disney's Flying Dutchman, 2006.

### *Can replication prevent catastrophe?*

The Flying Dutchmen is no longer seen at sea. The scientific knowledge of the fata morgana precedes the affect of the sighting of any phantom ship. In the case of the Flying Dutchmen what is lost with the representation of rational fear is the domination of the representation over rationality itself, becoming irrational to the extent that the image Flying Dutchmen itself causes catastrophe. Most superstitions and warding talisman function this way.

The artwork Soyuz/Progress is no talisman. When it is revealed that the spacecraft, somehow teleported to earth apparently long ago, is in fact an art object what is lost is the reversal of causal relationships which would have somehow allowed it exist as it appears to be. It is true that the immediate sense of mystical wonder is nearly completely effaced. However, this loss is nothing to be mourned as a sustained state of wonder leads to pathological ontology where indeed the sight of a mirage like the *Flying Dutchmen* means impending doom.

Once it is known that the object is the product of an artist and not a supernatural phenomenon, the anonymous witness, who comes forward only to have his very sanity called into question, is now freed to be a rational viewer. The same person who would encounter the work undergoes a turn and can experience in himself this turn of witness to viewer. The causal relationships which were once reversed in the immediate encounter with the object that seemed to be a product of this 'reversed order' are now once again over turned and restored with the knowledge that object is a work of art.



Dr. G. Hartwig, *Mirage, The Aerial World*  
(Image Source: NOAA Photo Library). 1913

### *Is Replication a Strategy to Dissipate Illusion?*

Nonetheless it was the artwork that suggested that it was in fact a product of a paranormal phenomenon and it was the artist that placed it in an empty lot so that it would be encountered in this way. The same artist that insisted on replicating in great detail a Russian space capsule knowing it would not be readily apparent to anyone encountering the work.

The precision of the replication by the artist appeals first to a direct link to the object, in this case the Soyuz capsule hovering somewhere overhead in space, then to the object, as it exists in the site of the encounter. Its character as an artwork is dispersed between these disparate sites, and they are linked only through the will of the artist. However, in the experience of the turn from witness to viewer it is possible for another person to participate in the reversal of physical and perceptual reality demonstrated in the artwork without giving way to the fictionalization of reality or the complete domination of rational thought. The artwork has no explicit purpose but it does have a function. Finding oneself caught in the semiotic net that transports a viewer from earth to outer space, from the moment of encounter to an unidentifiable distant past – a vantage point is created that is free from certain truths of lived reality. From this point discontent with lived reality can be experienced

In the process of production, the artist departs from lived reality by retrieving from it the form of the Soyuz, a product of an infrastructural program of a world super power, impossibly to a very specific but unremarkable point on earth. No limit of proprietary production or physical phenomenon is beyond the bounds of artistic will. Artistic will is constituted in the moment of reception in the moment when the process of production by the artist, the process of reception by the viewer, and the social-material world which they both inhabit all coalesce. As the artist falls into anonymity when placing his object under the railroad tracks the anonymity of the witness fades to the personalized

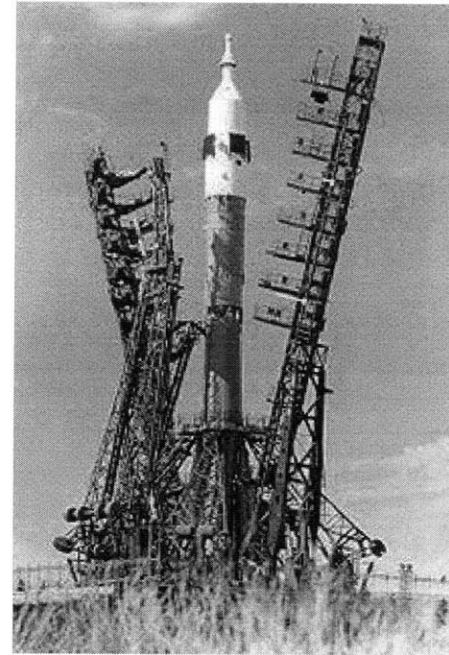
experience of the viewer and the artist and viewer unannounced to each other's individuality reconfigure the world they both share. An aesthetic form adequate to the form of social life we inhabit emerges, if only for a moment – which turned out not to exist at all in any conventional sense.

*Appendix:*

The Soviet Space Program that first produced the Soyuz project has since collapsed, and its accumulated knowledge and launch sites like Star City are now used for launching commercial projects or commissioned by developing countries for their own fledgling space programs. Similarly, its American rival, NASA, has recently canceled its Atlantis space shuttle program and is beginning to outsource manned space flights to private contractors.

The art object relied on the functionality of the Soyuz space capsule in space as fixed anchoring point. The other being the fixed point of reception of the Soyuz/Progress installed under the railroad tracks in Chicago. Now that one of those points has been unhinged the entire structure of the work threatens to collapse. This is not as much of a catastrophe as it might sound, as it is only one work and did not aspire to timelessness, though it appeared to have been timeless.

The actual potential for tragedy lies in social reality producing for itself its own image similar to *Soyuz/Progress*, but anonymously. As an anonymous product no one person can identify or see him or herself in the image. Technological progress exhausts itself to create its own image without ever being realized as social progress. In other words – no one “makes good” on the proposition held in advanced technologies and, furthermore no one is taken to task on doing so. The reason that this work, *Soyuz/Progress*, appears to have no audience is the reason that no one seems to be accountable for the object as it exists in the world in the first place.



abandoned Soyuz Capsule at Star City,  
Kazakhstan

**What is the artistic strategy of Replication's relationship to Technology?**

## ***HAARP***

**Paris. 2009  
Laurent Grasso**

Laurent Grasso's *HAARP* takes HAARP (High-Frequency Active Auroral Research Program) as its object of replication. HAARP is a facility created and operated by a coalition of United States military and government science organizations. HAARP and its replication *HAARP* address the relationship between the gallery and the laboratory. While there is no temporal register involved in this artwork, it is primarily concerned with bringing advanced technological developments back into the realm of social and cultural critique.

Laurent Grasso was born in France in 1972. Grasso has developed a fascination with the visual possibilities related to the science of electromagnetic energy, radio waves, and naturally occurring phenomena. Grasso also explores these sciences as they apply to paranormal activity.

The artistic strategy of Replication is site-specific. In the immediate sense it involves a site of replication and a site of reception and attempts to fold them into one another, however in another sense it functions differently depending on the social situation of the object of replication. Just as entire historical narratives can be rendered through a single object, so too can an object serve as an artifact from a field of disciplinary research as it is given form by the conditions the production that comprise that field.

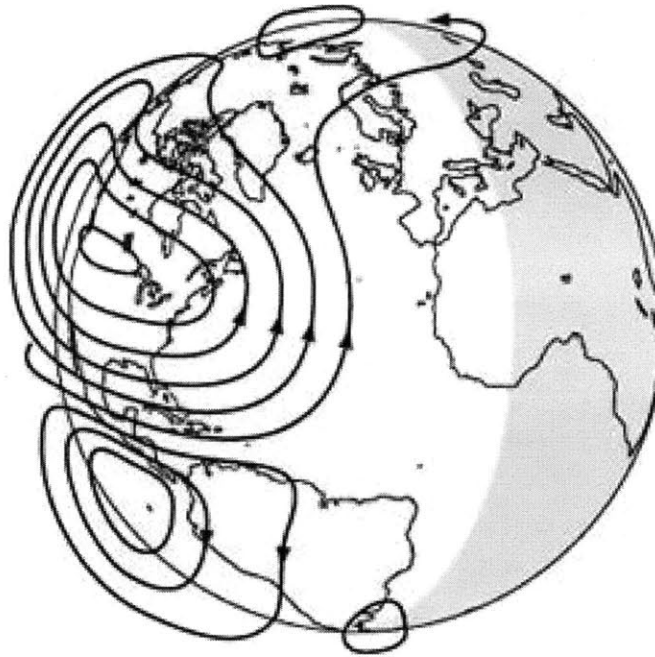
We have already established that Replication has its application first and foremost in the scientific method as the preeminent logic of production in today's society. Scientific knowledge as fact is only such if it can reproduced at any time in any place by anyone. In this sense knowledge must be created to be readily appropriated and elaborated into the logical next-step of technical production. The laboratory as a site of production is a reflective space that monitors the effects and changes in its object of inquiry by controlling and altering the conditions around that object.

In the case of the High-frequency Active Auroral Research Program or HAARP located in the small town of Gakona, Alaska it is the ionosphere itself that is altered and recorded. High frequency radio transmissions are sent into the ionosphere from the massive array of 180 antennas. The ionosphere is the uppermost part of the atmosphere, between the thermosphere and the exosphere. It is unique because it is ionized by solar radiation. This plays an important role in atmospheric electricity and among other things, effects radio propagation to distant places on the earth. The earliest undoubtable record of using the ionosphere to relay a wireless radio transmission is of Guglielmo Marconi who received the morris code for the letter 'S' transmitted from Poldhu, Cornwall, England in 1901 from St. John's, New Foundland, Canada. However, Nikolai Tesla had moved his laboratory to Colorado Springs, Colorado in the hopes of transmitting a message to Paris, France using the ionosphere two years earlier in 1899.

In 2009 an exhibition called Gakona at the Palais de Tokyo in Paris, France recently took HAARP and ionospheric transmissions as its object. The show was composed of four solo exhibitions featuring Micol Assaël, Ceal Floyer, Laurent Grasso, and Roman Signer. In some ways this show fulfilled Nikolai Tesla's attempt to complete an ionospheric transmission to Paris from the United States.

Though simulated maps of currents in the ionosphere have been created very little is known about it and the ability to manipulate it. Information about experiments in the ionosphere are either highly specialized or classified. It is for this reason that HAARP has been subject to conspiracy theories blaming it and the US government for the the recent earthquakes in Haiti and Chili in 2010, positing the HAARP as a geo-physical weapon.





Though these conspiracy theories have no basis in hard scientific reality they exist because the possibility of full knowledge of the function of HAARP is foreclosed. This withholding creates a culture in which technology appears to be the determining agency of social reality while operating automatically and autonomous of social concerns. Just as the prevention of catastrophe is wholly conflated with anticipation of catastrophe by Pentagon contingency planners, so too does this sense pervade social life but without the imperative of participation.

The wake of the atomic bombs over Hiroshima and Nagasaki became a way of life under the 'Doctrine of Mutually Assured

Destruction' throughout the Cold War. During this time massive intelligence networks proliferated from the USSR and the US that eliminated the possibility of a first-strike attack while leaving the possibility of a nuclear strike with the guarantee of retaliation and total annihilation. Though the USSR has faded from view the possibility of nuclear annihilation is omnipresent. For this reason the intelligence networks have remained largely intact and developed towards increasing complexity. The HAARP facility, as focused on developing new forms of long range communication and disruption and as such is one of the successors of this Cold-War technological initiative.



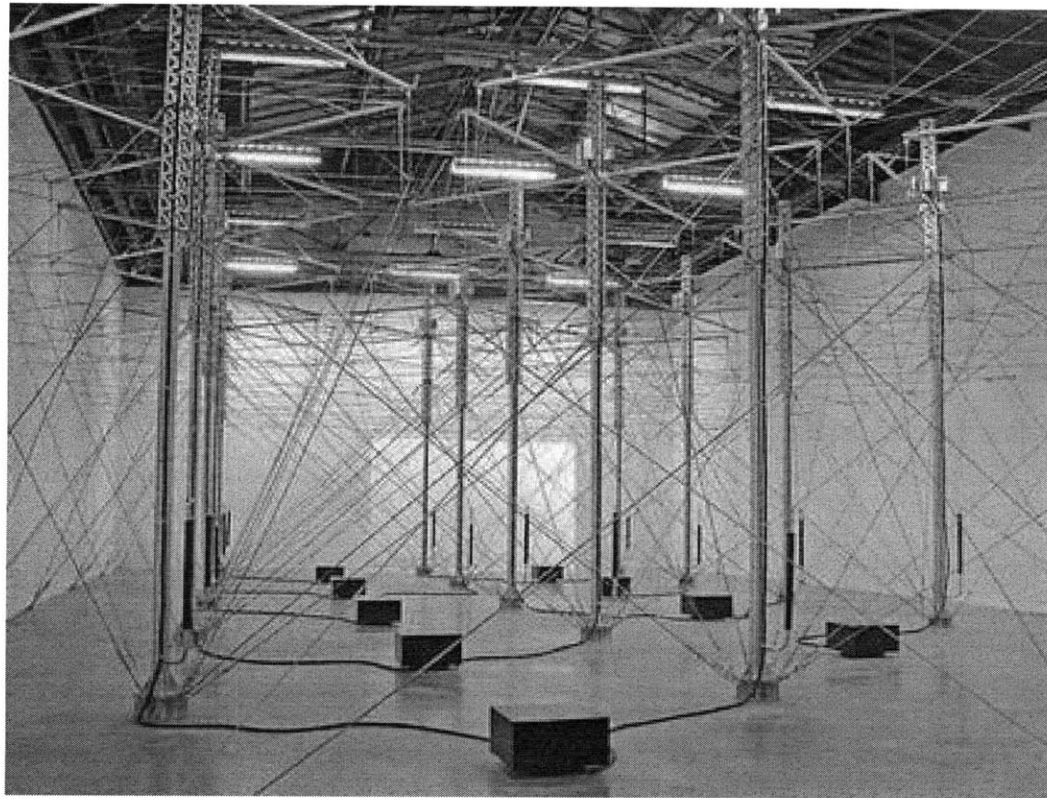
CHARLES STANKIEVECH . GHOST ROCKETS: HAARP . 2009

Laurent Grasso's contribution to the *Gakona* at the Palais de Tokyo exhibition takes the HAARP as its object of replication in a piece by the same name. Every aspect of the art installation in Paris corresponds directly to the military installation in Alaska. Grasso has taken the only liberty permitted within the orthodox structure of replication. He has altered the scale of the structure so that it might accord with and be in harmony with its transposed site. However, in the context of the gallery, the scale replication of the antenna array appears to be a kind of post-minimalist sculpture.

### *Is Replication a Form of Abstract Art?*

Laurent Grasso attributes the sculptural character of the site and artwork alike to the sense that "In reality HAARP looks first like a fiction."<sup>3</sup> It has been designed and tuned towards operating in a very specific range of material reality and gains its form from the conditions of that inquiry. This physical range of reality that very few humans will ever experience directly and only slightly more will experience remotely through the HAARP apparatus itself.

3 Christophe Ecofett and Laurent Grasso. *Gakona*/Palais de Tokyo/Laurent Grasso. <<http://vernissage.tv/blog/2009/02/18/gakona-palais-de-tokyo-paris-interview-with-laurent-grasso/>> 18 Feb. 2009



Laurent Grasso, *HAARP*, 2009.

The abstraction of the form of the the HAARP facility encountered in the landscape of the Alaskan wilderness can be attributed to the high degree of specificity of its function. However, in the context of the gallery *HAARP* derives its abstraction first from the language of minimalist sculpture or as Michael Fried called it in his canonical 1967 essay *Art and Objecthood* – literalist art. In this period the collective rejection of this category galvanized an entire generation of artists.

In this essay, Fried asks “What is about objecthood as projected and hypostatized by the literalists that makes it, if only from the perspective of recent modernist painting, antithetical to art? To this he replies “the literalist espousal of objecthood amounts to nothing other than a plea for a new genre of theatre; and theatre is now the negation of art.”<sup>4</sup> A sculptural object in theater is called a prop. It has a dedicated function within the schema of a script and actors. When encountering a theatrical object in a gallery

<sup>4</sup> Micheal Fried, *Art and Objecthood: Essays and Reviews*. Chicago and London: University of Chicago Press, 1998.

the indifferent viewer is turned into an actor in a play without his knowing it, by the artist.

Today installation art can be posed as the genre that the early minimalist or literalist desired. Replication as a strategy in installation art diverges from the Fried's indictment of the deceptive turn in the art of his day. This is because the artist also takes the place of the viewer when dislocating and replicating an object in a new place. If literalist art gave way to installation art then through the strategy of replication it has reconstituted a place for metaphor in art by literally carrying over one place to another. This is the basic definition of a metaphor.

Through Yael Bartana's *Wall and Tower* we demonstrated that the site of replication is just as important as the object of replication. This holds true in Grasso's *HAARP* as well however it factors differently. The object of replication is a laboratory. The results of a laboratory are true insofar as they can be reproduced in a laboratory anywhere in the world that matches the earth and atmospheric conditions of the Gakona site. The particularity of a site falls away to the conditions of production and reproduction in a laboratory where a select phenomenon can be examined and reflected upon. The standardization of the form of the gallery as a white-walled, reflective space with humidity controls and spot lighting allows for an artwork to migrate from one gallery to another and produce what is assumed to be the same experience. Grasso's transposing of the laboratory into the gallery is not so foreign after all. However, anything that enters the gallery from the laboratory can never return back to the laboratory while nothing from a gallery should enter a laboratory unless it is somehow smuggled into the controlled space.

### *How is Replication in Art a form of Mastery?*

Laurent Grasso himself has never visited the HAARP facility. However, he is able to gather enough of the fragments of the site that find their way into the edifice of popular science culture

towards constructing an exact scale replica of the research site in Gakona in a gallery in Paris. Art must contend with the material conditions of lived reality. If a severe imbalance has occurred between civilian life and the technological infrastructure that surrounds it under the pretext of preserving civilian life in a fully administered world, art must develop an aesthetic form that is capable of rendering technological form no matter how complex. In the absence of the Vanguard the Avant-Garde is left as a bulwark against runaway instrumental reason. Art must advance cultural forms of life without being drawn back into this instrumental reason. It must remain functionless and this is perhaps the greatest distinction between Grasso's *HAARP* and the US State Department's HAARP.

Grasso's ability to reproduce the HAARP in the gallery immediately demonstrates a form of mastery over this monumental form and its ambiguous potential function. The HAARP facility cost upwards of \$250,000,000.001 funded primarily by the US Department of Defense. The cost of fabricating Grasso's installation *HAARP* at Palais de Tokyo is undisclosed but it based on personal material estimates it could not have cost more than \$11,000.00.

The original HAARP existed before its replication. It is however, bound to its replica *HAARP* and inextricably altered after its replication. The ability to create a mirror held to the world which it must confront is the destructive capability of art. Aesthetic destruction through a process of replication is however not complete annihilation as our military counterparts would imagine destruction. The social destruction of fact through replication brings those parts of our social existence that appear to be beyond criticism or in the case of HAARP beyond knowledge, back into the sphere of social life. As a sculpture the HAARP becomes "completely open not closed"<sup>5</sup>.

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5 Christophe Ecofett and Laurent Grasso. Gakona/Palais de Tokyo/ Laurent Grasso. <<http://vernissage.tv/blog/2009/02/18/gakona-palais-de-tokyo-paris-interview-with-laurent-grasso/>> 18 Feb. 2009

**Is Replication a form of Historic Preservation?**

## ***The Sun Sets at Teufelsberg***

**Haseeb Ahmed  
Berlin, Germany. 2009**

*The Sun Sets at Teufelsberg* is made up of eleven site-specific installations at the abandoned American radar station Teufelsberg located at the edge of Grunewald Forest, Berlin in what was West Germany. These installations were exhibited one night only in a guerilla opening following the same name of the project, *The Sun Sets at Teufelsberg*. This project is a study in the dynamics of replication. It is only in its second iteration, *Remote Viewing: Teufelsberg* that a replica of the radar station is created at the site of its origin, the Massachusetts Institute of Technology. I originally encountered Teufelsberg while working for the editor of the journal *An Architektur* and director of the architecture firm IFAU und Jesko Fezer in Berlin in the Summer of 2009. It was my intent to study how ideology can take the form of

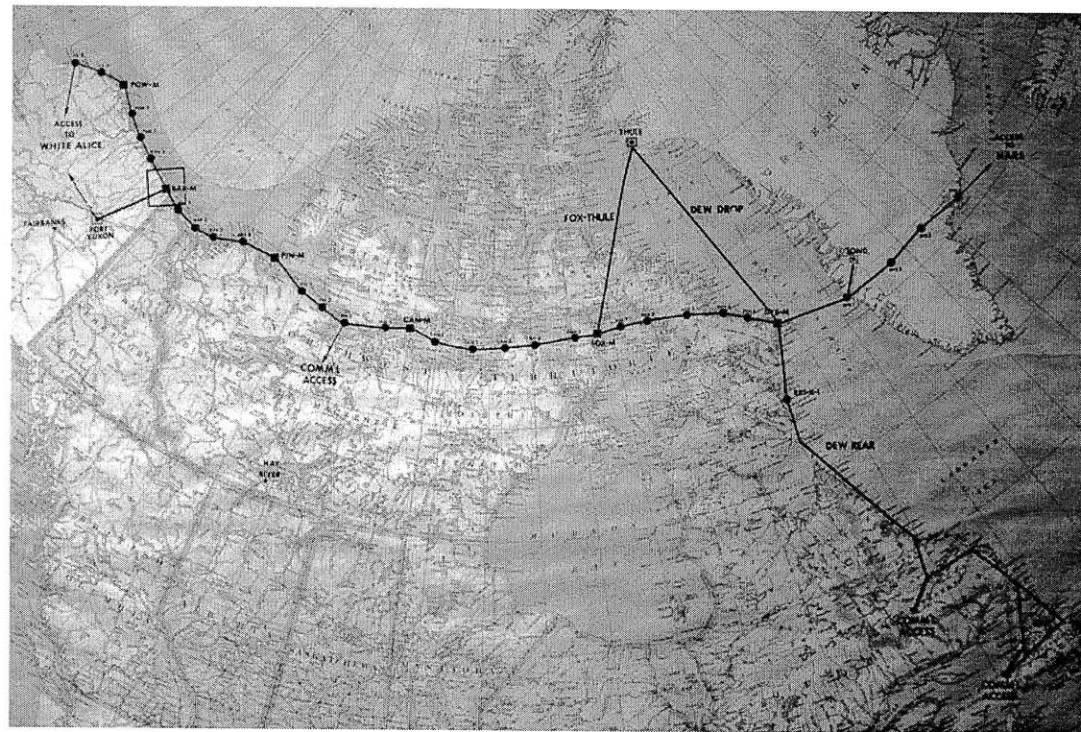
infrastructure and architecture. By creating a project that focused on the preservation of the badly damaged station, I explored “what of the past can carry through the present to confront the future” as bound up with the site.



The Teufelsberg Radar Station gains its name from the hill upon which it sits. Berlin has no natural hills; it does however, have two artificial hills. Teufelsberg translates to the Devil's Mount in English. The hill is composed of the rubble of nearly 400,000 homes brought to this location to bury Hitler's Military University which was built too sturdily to demolish with explosives.

Following World War II Germany was divided between East and West. The East became part of the USSR while the West was administered by Allied forces comprised mostly of US and English troops. At the height of the Cold War, a complex of radar stations was built throughout the the arctic circle and Western

Europe. These radar stations became the DEW Line. The radar technology deployed to these sites was developed at the MIT RadLab, one of the world's first interdisciplinary, educational, and industrial research laboratories. The geodesic domes used in the DEW Line were designed by Buckminster Fuller in an irregular tiling order so as to create a form that would not interfere with the radar antennas. The four radar domes on the Tuefelsberg site were made to function as an invisible architecture. The Teufelsberg radar station was the closest of the DEW line stations to the USSR and monitored radio communications, bomber patrols, and if need be the event of a ballistic launch.



Map of the Dew Line in North America.

The Berlin Wall fell on November 9, 1989 and four years later the Teufelsberg Radar Station was decommissioned by the US Government. Though Germany underwent a process of reunification, the traces of divergent social orders had manifested themselves literally in concrete. The overcoming of the persistent historical divisions of the Cold War had to entail the reformulation of the built environment itself. One example of this is a parcel of land on the border of the former German Democratic Republic and Federal Republic of Germany. This site once housed the Palace of the Republic, the Capital of the German Democratic Republic or East Germany. In 2006 it was decided that the Palace of the Republic should be dismantled and

that a winter palace, the Stadtschloß, completed by the Prussian King Frederick William IV in 1845 should be re-erected on the site. The GDR had dismantled the castle to build the Palace of the Republic on that site.



Site of the Palace of the Republic (clockwise from top right): 1845, 1977, and 2007.

This act had symbolic purchase for the GDR and followed the rhetoric of socialism overcoming bourgeois and feudal forms of social organization. For this reason, the dismantling of the Palace of the Republic also had symbolic value as a reversal of GDR. By returning the site to the Stadtschloß a continuity was created between 1845 and 2006, effacing the traces of the Cold War and even WWII that had been presented and preserved through the existence of the building. The decision was the result of a public referendum made official by a decision by the Germany's Bundestag (Parliament). This site was located in the heart of the historic museum district in Berlin. The Teufelsberg radar station presented the same history in a very different way on the periphery of the city.

The Teufelsberg Radar Station fell into serious disrepair. It is the subject of heavy vandalism. Every surface has a patina of spray paint and every window is shattered. Floor tiles are thrown out of windows to reveal wires ripped from their connecting points. At present Teufelsberg sits somewhere between slow annihilation and a future museum to the Cold War frequented by veterans, fathers, and their sons. In the meanwhile it is used to house underground techno parties and the sexual and drug induced explorations of adolescents. The government attempted to sponsor initiatives to turn the site into a resort as it does indeed exhibit the best view of the city. However, the military structure was not so readily re-appropriated for leisure.

In 2007, the film director David Lynch purchased the site on the behalf of the movement for Transcendental Meditation lead by Maharishi Mahesh Yogi (the same Yogi who advised the Beatles). Their plan was to build a University for Transcendental Meditation on the site. However, this immediately bore too much of a resemblance to Hitler's military university buried some 400 feet below. During a public lecture at the Freie Universität in Berlin David Lynch stood together with the Raj Emanuel Schiffgens, a figure dressed entirely in Indian costume and announced plans for constructing a University for Transcendental Meditation at the

site of the Teufelsberg Radar Station. Lynch and the Raj made the case for the university by explaining to the audience the need for an "Invincible means no more negativity. No more enmity. We want to make Germany invincible so they cannot defeat you!" This call resonated with the audience's historical memory of Nazi rhetoric uttered some 50 years earlier in the same place. The lecture hall quickly turned to chaos. After laying the foundation stone Lynch was phoned by the German Ministry of Culture and banned from constructing the university on the site.

Upon encountering this site in 2009 the land still belonged to David Lynch but was largely un-altered. Teufelsberg is remarkable because it is able to function as a substrate for many of the events that have taken place in Berlin over the last 75 years. It had been able to continue to the point where it became pregnant with its own representation.

Society had anonymously produced a monument to itself in the form of the Teufelsberg Radar Station. This is similar to the process of the production of an artwork, however, the artists as producers number in the thousands without realizing it. The intentionality bound up with authorship is lost in the construction of monuments produced and received anonymously.

What follows are documents of my work to re-activate, redirect, recycle, and construct meaning in the radar station itself. Both physical and historical material bound up in the site are used to construct my work there. The final result is comprised of eleven site-specific installations. Very little was brought into the site for these installations and the most successful gestures are those that recycle elements of the site back into the site. These installations were presented at a one night guerilla opening entitled *The Sun Sets at Teufelsberg*. The images below are documents from that night. It should be noted that with the evening of the event came the worst thunder storm Berlin had seen that summer.<sup>3</sup>

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3 Photo Credit for *The Sun Sets at Teufelsberg* goes to Britney Anne Majure





Haseeb Ahmed. *David Lynch and the 'Raj' presenting their Plans for a Transcendental University in Berlin, Germany*. Fresco. 2010

## The Sun Sets at Teufelsberg:

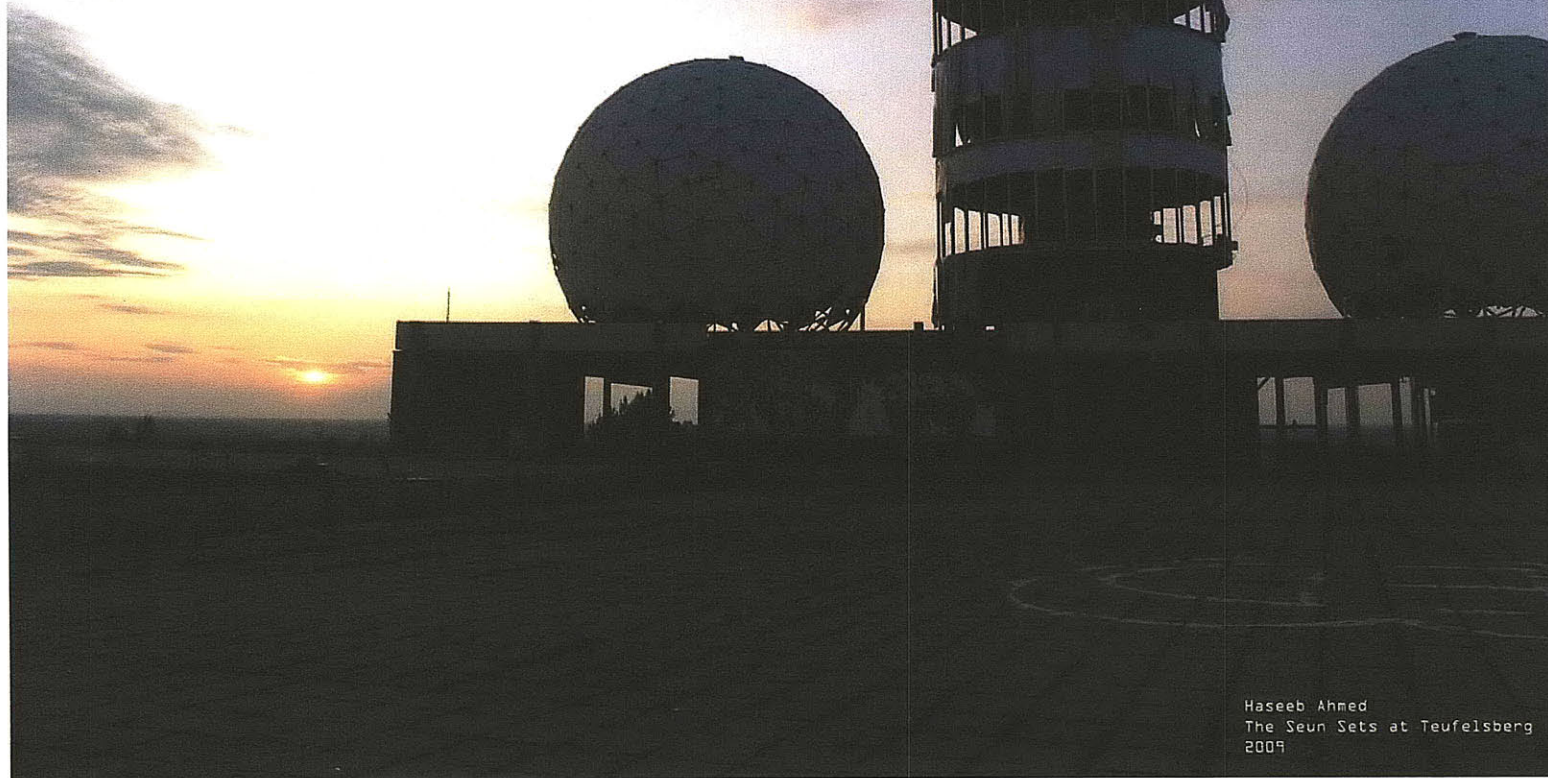
Berlin, 2009

The project consists of ten interventions at Teufelsberg Towers, an abandoned American listening post in the heart of Grunewald forest- Berlin.

Using materials found completely at the towers I worked to clarify the complex historical moments that make up place. Even the hill that the site sits atop of is made of 400,000 homes destroyed in WWII.

By rotating parts of the building to into other we are able to reconfigure the physical state and meaning bound up in the space. Some installations restore parts of the building while others elaborate on it.

In the form of this piece this site literally houses its compressed and consolidated historical context.



Haseeb Ahmed  
The Sun Sets at Teufelsberg  
2009



Dear Mr. David Lynch,

I hope that this letter finds you well.

I wanted to let you know that I have taken the liberty of doing a project in the Teufelsberg Towers. I understand that you own them with the intention of building a University for Transcendental Meditation there but have been barred from pursuing your plans by the German Government.

My work does not have anything to do with transcendental meditation but it is the attempt to inhabit this place. Created as a forward listening post for the Allies with its audio-gaze towards Soviet Russia, the Cold War of defined borders is now over. Stripped of its function the ra-dome structures made to be invisible disintegrate. This allows this place to be many places at once. I am taking account of these aggregate spaces and moments I've come across in my adventuring there. I would like to continue my work at Teufelsberg as an artist in residence and I hope you will consider this. as an application.

Using materials found completely at the towers I am working to clarify these moments that make up this place. In the cafe hangs a real-estate sign for "Resort Teufelsberg" and the floor follows the contours of the Teufelsberg Plateau, a hill made of 400,000 bombed out homes ontop of Hitler's University of Transcen... I mean Military Technology. The Cafe is the only wooden structure in the place and supporting the structure are long beams of charred lumber.

We are rotating parts of the building to other parts to create some of these pieces, for instance the steel and ceramic tub we found has incredible acoustic qualities so it now sits on the radio antenna platform in the main dome where the tonal qualities of both can be explored. I found only one solid pane of glass remaining in all of the buildings but I did gather the cubes of broken safety glass and made a bed room out of it.

Working this way however, only makes sense if you take things back also to where they belong. 200 feet down and 600 feet away we found a half circle of carpet and brought it back to the 4th floor of the tower where it fits perfectly. The cut canvas skinning the tower takes the form of curtains and its carpet brings it up to the NSA standards of a live-work space.

Besides having a past and a present it must also have a future. There are five domes at the site but there were plans for a sixth. Its base is completed and its bolts wait to anchor a dome that never arrived. We hit play on this process and created that sixth dome. Its designed to block the panorama of the city while only its sound remains. I also took the liberty of inviting a guest, a fellow artist Charles Stankievich, to create a piece for Teufelsberg. At 20:00 we will launch a model of a V2 rocket in the main dome. Turns out that the same year that the DEW line radar stations went online they were made obsolete by the launch of the Soviet Sputnik. History is compressed and this scenario is replayed inside of the Main Dome.

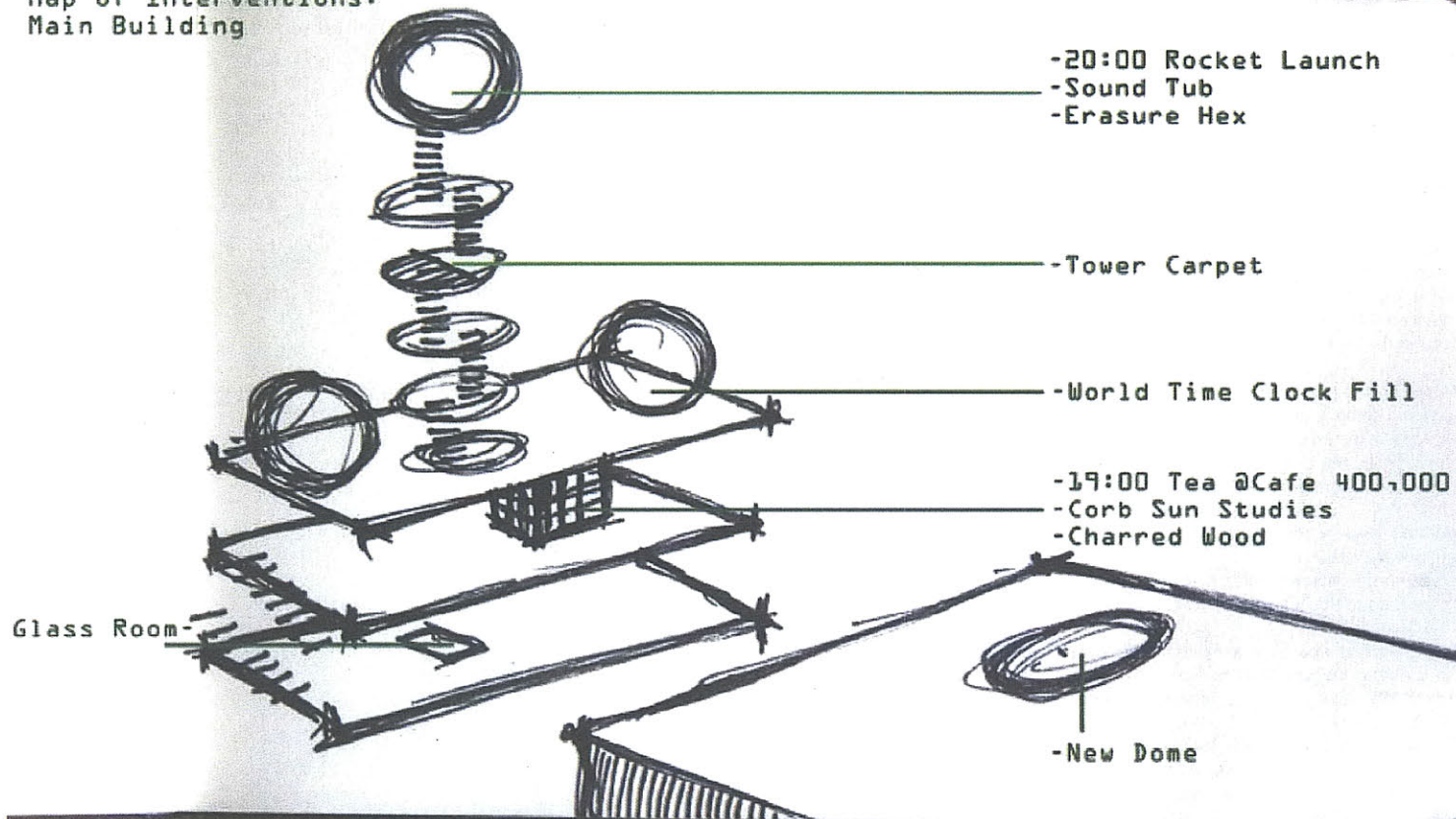
By the time you receive this letter the work will have been over. I didn't ask for you permission but I hope for your have a smiling approval. I would like to continue my work at Teufelsberg as an artist in residence and I hope you will consider this. as an application. Wishing all the best to you on your work Mr. Lynch.

Warm Regards,  
Haseeb Ahmed



This letter was sent to David Lynch, director and owner of the Teufelsberg site informing him of the project I had executed there. It functions as a letter and as a statement of purpose for the project. As of yet, there has been no reply from Mr. Lynch.

Map of Interventions:  
Main Building



A map of all of the installations located throughout the installation



*The Sun Sets at Teufelsberg: Cafe 400,000:*

The event began at a wooden structure in the main building turned into a cafe. Tea and beer were served along with snacks. The floor of the Cafe is a topographic model of the Teufelsberg hill made of 400,000 homes.

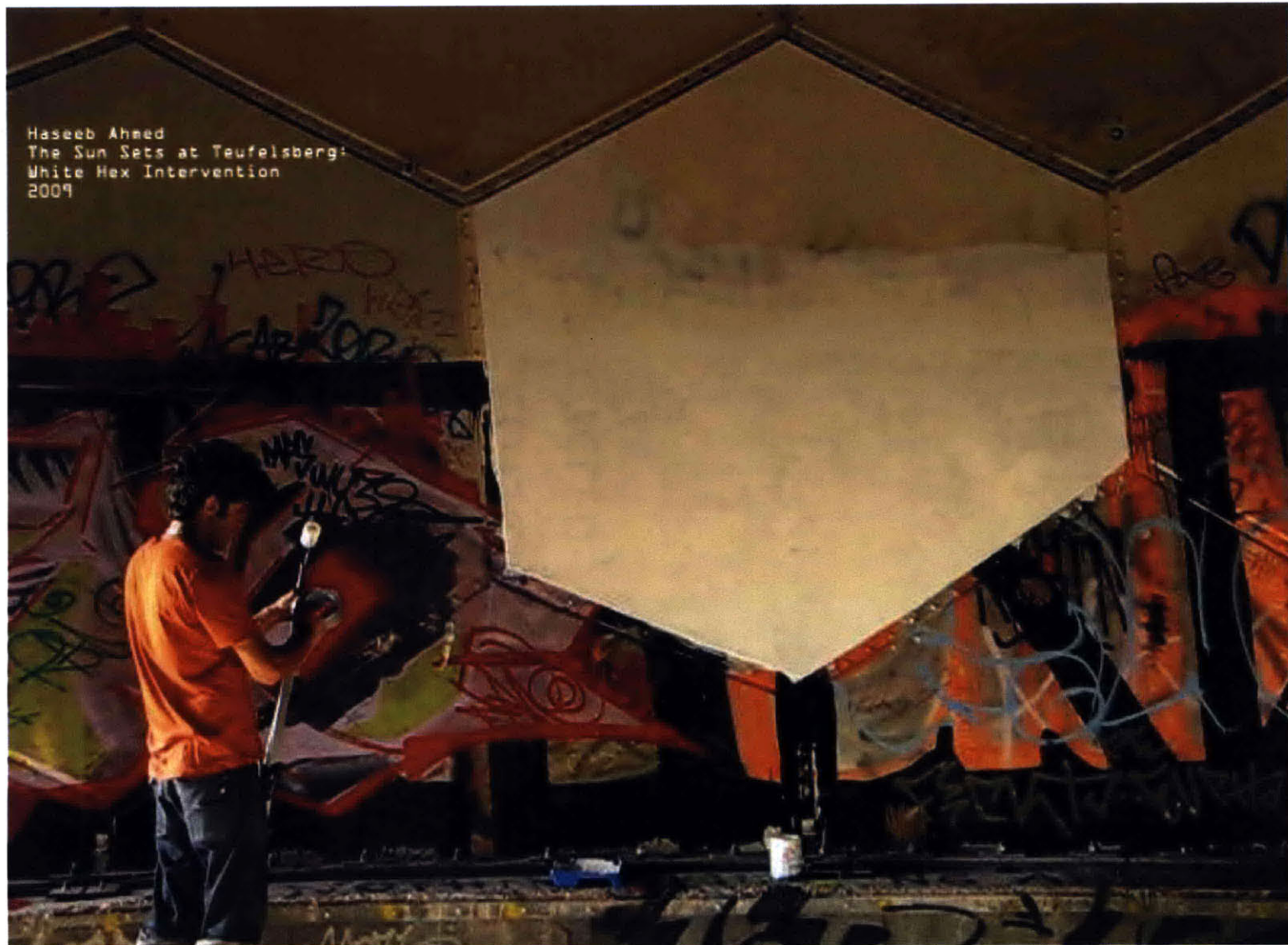




*The Sun Sets at Teufelsberg: Tower Restoration*

A piece of astro-turf found 300 meters away was returned to the tower to find that it fit perfectly in the main tower. By reversing the process of degradation, the building, its history, and the questions it asked were preserved.





*The Sun Sets at Teufelsberg: Erasure Hex*

I returned every day to the main radar dome of the tower to paint a single hexagon white only to find that it would be covered once again with graffiti. While I was creating space for more graffiti I was also locked in a push and pull dynamic with anonymous graffiti artists to reveal structure instead of surface.





*The Sun Sets at Teufelsberg: New Domes Four and Five*

At the time of its abandonment, two more radar domes were planned for construction at the station. Once the Wall fell and Germany was united there appeared to be no need for a fifth and a sixth radar dome. However, just as the conditions of the Cold War persisted far beyond the actual cold war, so too was it necessary to continue the project of expansion at the radar station.



In the final installation I collaborated with Canadian artist Charles Stankievich. Charles had created a series of projects dealing with the DEW Line installations in the Canadian Yukon where he lived and worked. As part of his project we launched a model of a V2 Rocket in the main dome. The sound of the

rockets ignition could be heard for seven minutes after the launch throughout the dome. The sound became increasingly distorted digitally and through the acoustic properties of the dome itself.





Using the V2 model rocket was significant as it was deeply embedded in the site. Not only was the site sitting atop of Hitler's technical military university, but the scientists that were part of the Nazi V2 project formed the foundation of both the Soviet and US space programs. They were split evenly after the

war. The same year that all of the DEW Line stations went online is the year that they became obsolete because at this time the first rocket was satellite was sent into space. Intelligence gathering was no longer bound to specific geographic coordinates.

**What are the Modes of Retrieval in Replication?  
How can One Inhabit the Space in Between the Original and the Replica?**

## ***Remote Viewing: Teufelsberg***

**Haseeb Ahmed  
MIT, Cambridge, MA. 2010**

The second iteration of the Teufelsberg project replicates the Teufelsberg radar station at the site of its origination. Nearly all of the radar technology deployed in the DEW line stations, including at Teufelsberg was developed at the MIT RadLabs up to and including the geodesic domes designed by Buckminster Fuller. This project employs two different strategies of retrieval: remote sensing and remote viewing. The project was executed in collaboration with Charles Stankievech, who had also collaborated with me on the first Teufelsberg project, and Oliver Jahn, a researcher in the program for Earth, Atmospheric, and Planetary Sciences at MIT.

The first Teufelsberg project was site specific. It did not seek to create a replica but rather preserve and re-present the existent Teufelsberg Radar Station in all of its complexity. However, there were limits to working within this monumental site. The inertia of this accumulated history proved to be too great in nearly every instance that I made contact with it. Only in the moments where I worked with the site against its inevitable destruction was I able to create a register for the cultural trajectories bound up in the site. The end result was a proposition: what of the past should be carried over and continued into the present? This open proposition could still be intervened in by a bureaucratic order. For instance, my project could have been mistaken for a call to turn the complex of the radar station into a museum, the same call made by veterans who had once served there. It was only by attending the opening and experiencing the performative installations that the idiosyncrasy of my approach took hold.

Therefore, one year later, I decided that it was necessary to create a distance between the Teufelsberg and myself in order to re-present it. A register of proximity was necessary to approach the site of Teufelsberg overburdened with its own historical circumstance. The ability to have a distance from which to view the object of reflection, the abandoned radar station itself, was needed firstly because the sheer size of the complex dwarfed nearly all of my attempts, but more importantly, the site had already arrived at the status of monument but without the bureaucratic intentionality and deliberation normally entailed in the production of monuments. It seems that history was able to take its course to the extent that it became a parody of itself. David Lynch's purchase of the station and the duality between his university and Hitler's university sealed its status as a representation of itself. This automatic process of production latent in social reality would also have to become an part of the object of reflection.

To bring this project full circle and address the issues I had raised in my initial explorations at the site, I brought the site

specific installation at Teufelsberg and the replica of Teufelsberg at MIT into a single framework. This second half of the project replicated Teufelsberg at its site of origination- MIT. To be more specific I chose to work with the Earth, Atmospheric, and Planetary Sciences department. This collaboration was two fold. First the project had the full participation of Oliver Jahn, an EAPS researcher and secondly the project was produced using the EAPS VisWall apparatus. The VisWall is composed of 60 independently controlled high-definition LCD screens. The VisWall was located in the Stata Center, home to the MIT Computer Science and Artificial Intelligence Labs. This is usually used by EAPS to stitch together complex climatic simulations or three-dimensional maps of the earth and other celestial bodies. All of these simulations and data visualizations are the product of remote sensing data.

Remote sensing is a strategy for distributing networks of sensors and relaying the captured data describing the site of their deployment back to a command site. Typical example of remote sensing are deep sea exploration, remote weather stations, or deep space satellites. Remote sensing is the distribution of the human sensory apparatus and consciousness across places which would otherwise be impossible to experience directly. EAPS made their research material available to me to use towards my own ends.

This remote sensing data was paired with a technique of remote viewing. Remote viewing is a practice developed by the US military during the Cold War. A special division of the US army was created called the New Earth Brigade to explore telepathic and psychological dimensions of warfare and intelligence. Remote viewing operates on the basis that if society is a single totalized entity then it is possible to see through the eyes of any other person anywhere else in the world. The product is usually a quickly drawn sketch of a remote location which vaguely resembles it.



By combining techniques from the hard sciences and speculative science together with raw source material, audience participation, and massive visual apparatus – I replicated the Teufelsberg Radar Station in Berlin, Germany at MIT in Cambridge and then sent it back to into the space in between the two after it was reproduced. This project follows the original Teufelsberg project at the site insofar as it not only entails the creation of an installation but also entails a particular way of inhabiting or performing that installation. I had learned that when dealing with objects or sites with a previous function or performance, it was necessary to make them perform in a new way. The current form of performance would create friction with its original reason for being and bring it to the surface as part of the object of critique and reflection.



The project began with Gina Badger, a fellow SMVisS candidate, introduced the project and the participants. She also mentioned that this is a continuation of a project for Charles and me.

**EAPS Researchers:**

Oliver Jahn  
Chris Hill  
Patrick Heimback

**Acknowledgements:**

Program in Art, Culture and Technology at MIT, Prof. Gediminas Urbonas, Gina Badger, and Director Ute Meta Bauer.

ACT

MIT

Massachusetts  
Institute of  
Technology

EAPS  
Earth, Atmospheric and Planetary Sciences

At this point she handed out a booklet that we had created describing some of the key information and movements in the piece. Note: The title has since changed from D.E.V.I.L. Back the Remote Viewing: Teufelsberg.

# D.E.V.I.L.

I. REMOTE VIEWING: THE DEVIL'S MOUNT  
II. SYMPATHY FOR THE DEVIL

HASEEB AHMED  
CHARLES STANKIEVECH

STATA CENTER  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
CAMBRIDGE MA

8pm MAY 17 2010

## D.E.V.I.L.

STATA CENTER + AMPHITHEATER  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY [MIT]  
CAMBRIDGE, MA, USA

**Part I : REMOTE VIEWING: THE DEVIL'S MOUNT**  
Stata Center + VisWall Remote Viewing Session

**Part II : SYMPATHY FOR THE DEVIL**  
Stata Amphitheatre

**REMOTE SENSING** technology developed at MIT during the early 1950s, in such programs as **SAGE**, **DEW** and **BMEW**, became the backbone for surveillance systems during the Cold War. In the summer of 2009 Ahmed + Stankievecch created a suite of work that explored the site of **TEUFELSBERG** in Berlin—an abandoned National Security Agency listening station embedded in East Germany. Their most recent collaboration returns to MIT as a historical site and source of the original research for much of the tactical fieldwork conducted at Teufelsberg during the Cold War. By facilitating a **REMOTE VIEWING** session with EAPS researchers at MIT focused on the site of Teufelsberg, the flow of history is reversed. Finally, the remote viewing documents are transferred to a **V2 ROCKET** launched from the Stata Center amphitheater at the heart of MIT.

## GLOSSARY

**GEODESIC RADOME:** First built in Germany prior to the Second World War to house the Zeiss planetarium in Berlin, the geodesic dome was popularised by its American patent-holder, R. Buckminster Fuller. During the early 1950s, Fuller collaborated with the MIT's Lincoln Laboratory and the US Department of Defense to create the first ridged radar domes, or radomes, to house Arctic radar antennas capable of functioning in severe wind, temperature and ice conditions, while being efficient to transport and assemble. The distributed engineering design of the geodesic was a precursor to the ARPANET program and can be seen as a symbol of modern warfare's shift from direct conflict on a shared front to contemporary electromagnetic combat via distributed networks. By the end of the 1960s, the geodesic dome's iconic status as **DEW** (Distant Early Warning) architecture had been subverted by alternative cultures like Drop City as a means of expressing Fuller's concept of "Spaceship Earth" and ecological concerns. Today, geodesic domes represent the ambiguity of invisible military operations in the electromagnetic realm, as well as counter-culture utopias.

**GHOST ROCKETS** is a site-specific series by Stankievecch that tactically maps the history of ballistics from the birth of military rocketry in Europe through MIT laboratories and the NASA space program to US Military bases in the desert and DARPA research stations in the Arctic. Under the guise of a rock'n roll world tour, each site hosts a rocket launch spectacle with video documentation and satellite objects. The namesake of the series stems from UFO sightings in Scandinavia post WW2 usually attributed to secret Russian launches of commandeered V2 rockets over the Baltic Sea.

**REMOTE VIEWING** operates from the social stand point of a total social body, and if this is true than anyone can see through the eyes of anyone else anywhere in the world. Remote Viewing was experimented with by the US military in the 1970s within the New Earth Army initiative.

**REMOTE SENSING** is a collection process that records or relays in real-time information from a remote location for presentation and interpretation of the data for strategic analysis. For this project we are working with EAPS (Earth Atmospheric Planetary Studies) researchers at MIT who are working with data and visual simulations of global plankton populations in response to changing climate conditions.

**SAGE** (Semi-Automatic Ground Environment) was a "large, distributed, digital, real-time, surveillance, communication, and command-and-control system" developed in the early 1950s in parallel with the **DEW Line** at MIT's Lincoln Labs and is the birth of networked radar and systems engineering which today covers the fields of Air Traffic Control, Space Surveillance, Missile Defense/Offense, Air Defense, and Tactical Surveillance. **SAGE** was the precursor **RADAR** system that eventually evolved into **BMEWS** (Ballistic Missile Early Warning) to detect Russian ICBMs developed out of the theories of 19th century Russian mystic Nikolai Fyodorov and the **V2 rocket** program.

**TEUFELSBERG (Devil's Mountain):** Grunewald Forest, Berlin, Germany. Teufelsberg is a site with a complicated and layered history: originally, the site of the **NAZI** military-technical college designed by Albert Speer during WWII the college was then buried after WWII by the rubble of 400,000 bombed homes creating the highest elevation in West Berlin. During the Cold War the mountain functioned property for a US National Security Agency spy station. After a failed real estate venture for condos, it was announced by American filmmaker David Lynch that he bought property for future home of the Transcendental Meditation University.

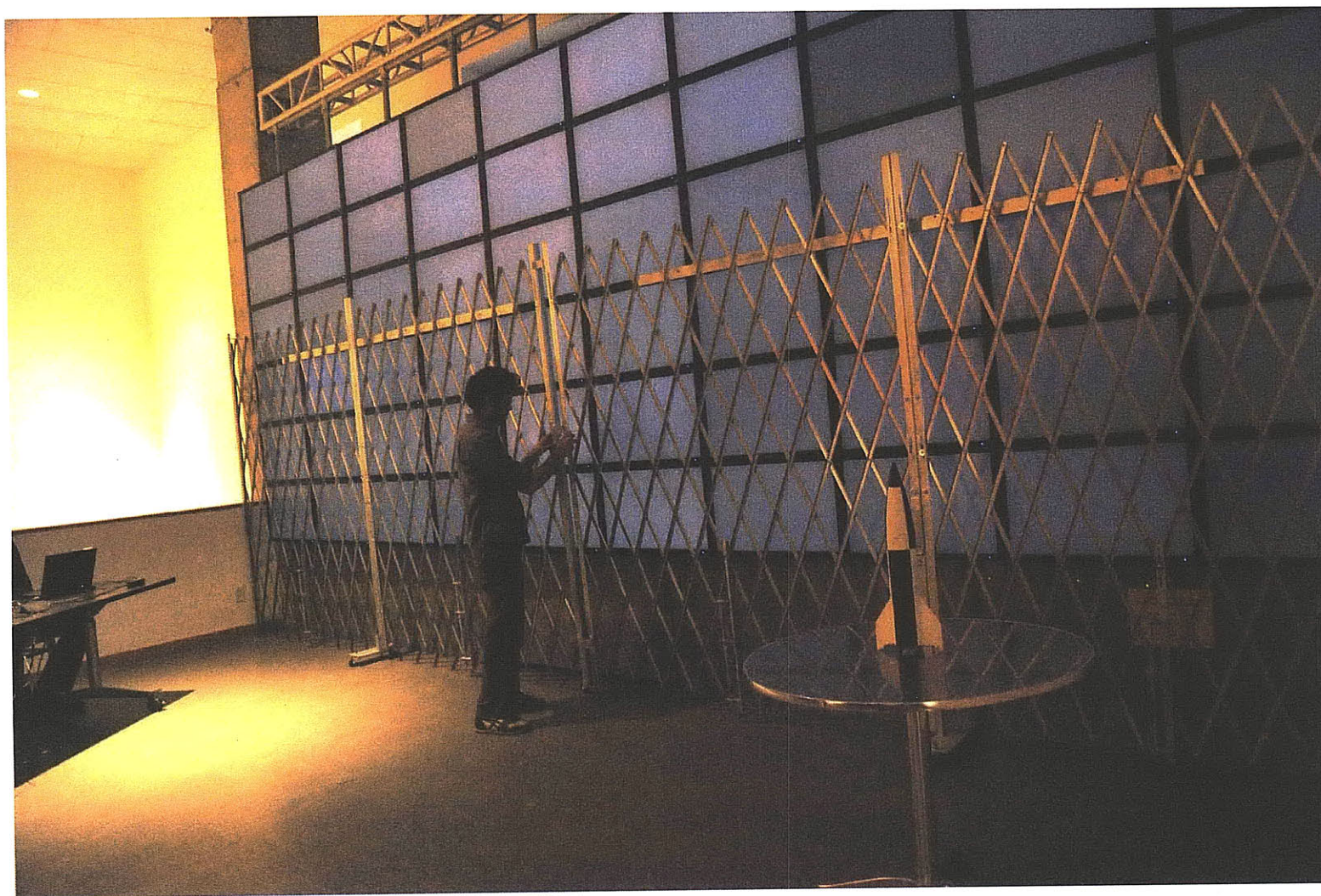
**V2 ROCKET:** Born out of a Nazi project devised to circumvent the Versailles Treaty that prohibited Germany to develop an armed Air Force, the **V2** development was guided by Werner Von Braun and Albert Speer during WW2 in Berlin, Peenemunde, and Dora-Mittelwerk. The **V2** rocket was the first ballistic man-made object to enter space and is seen as the precursor to both space travel and inter-continental ballistic missiles (ICBMs). At the end of WW2 both the US and USSR seized both the Nazi scientists and remaining **V2s** to jumpstart their own long range ballistic programs.





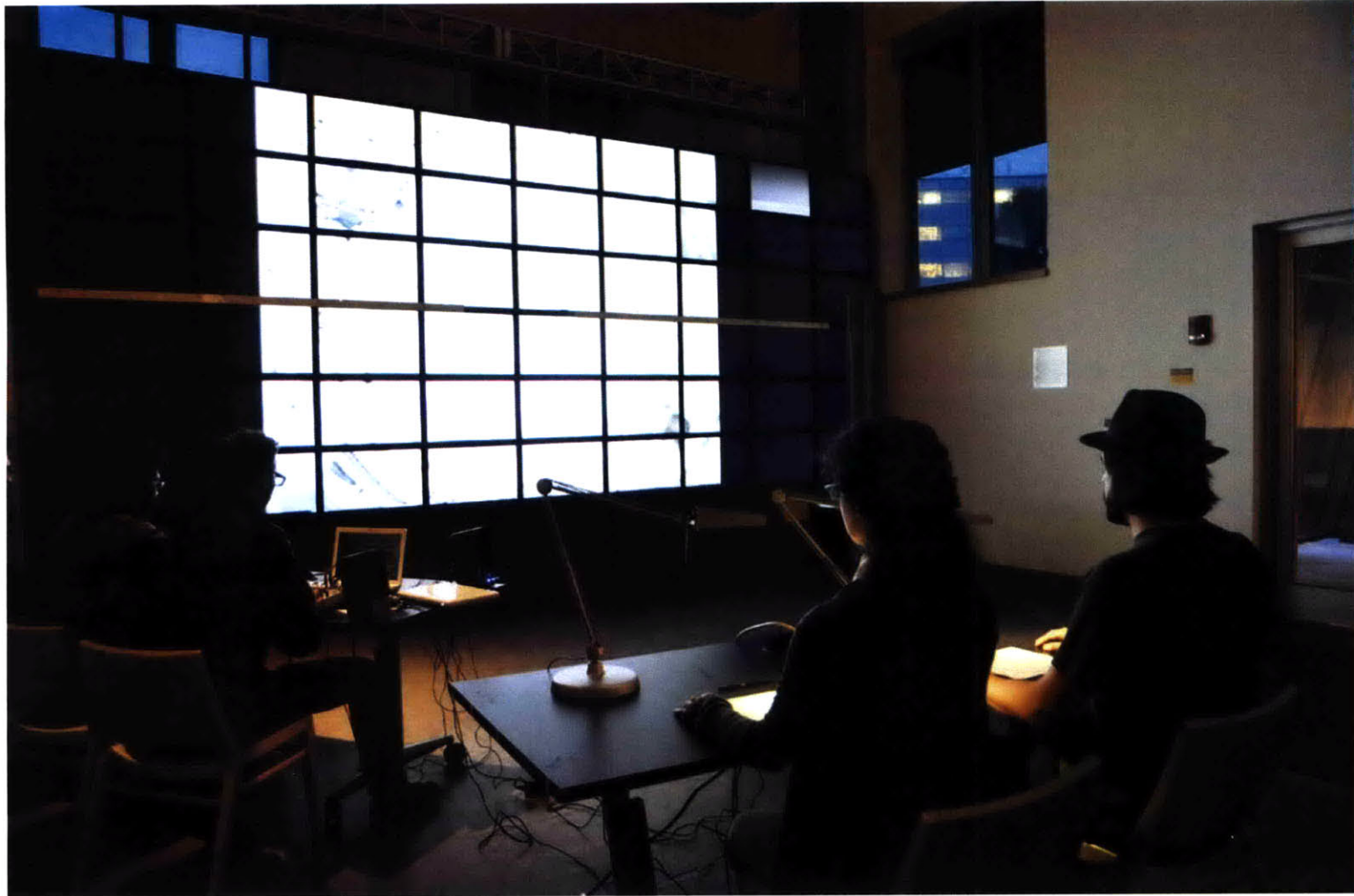
After this we proceeded into the VisWall in the Stata Center. All of the operators entered through an elevator directly onto the mezzanine floor. First Oliver Jahn, Charles Stankieveh and myself entered as the operators of the VisWall. Then David Robert and Madeliene Clare Elish entered as Remote Viewers.





I then stepped forward to unlock and prepare the VisWall and this marked the beginning of the Remote Viewing session.





Everyone took their assigned positions and the VisWall Remote Viewing session began with an appropriated video studying the whirlpool flow in a tank. At this moment a sound also came on that persisted throughout this part of the performance. A song commonly known to listeners in the west as the “Tetris Song” was played in one minute loops and each time became increasingly abstracted. Originally it is a Russian folk song

“Korobeiniki” and became popular during WWII. I chose the song for an esoteric reason. In the head-quarters of the MIT model railroad club in building N-52 there is a model of the Green building where my collaborators in EAPS are based. The facade of the model was transformed to play Tetris. It is for these tangential reasons that





it was reintroduced into the installation to create more of an enclosed or introspective space.

The form of the book this thesis is taking does not allow me to present the video. This is one example of EAPS material that was used in the performance interspersed with my own material depicting Teufelsberg. This particular image is of the Argo Float

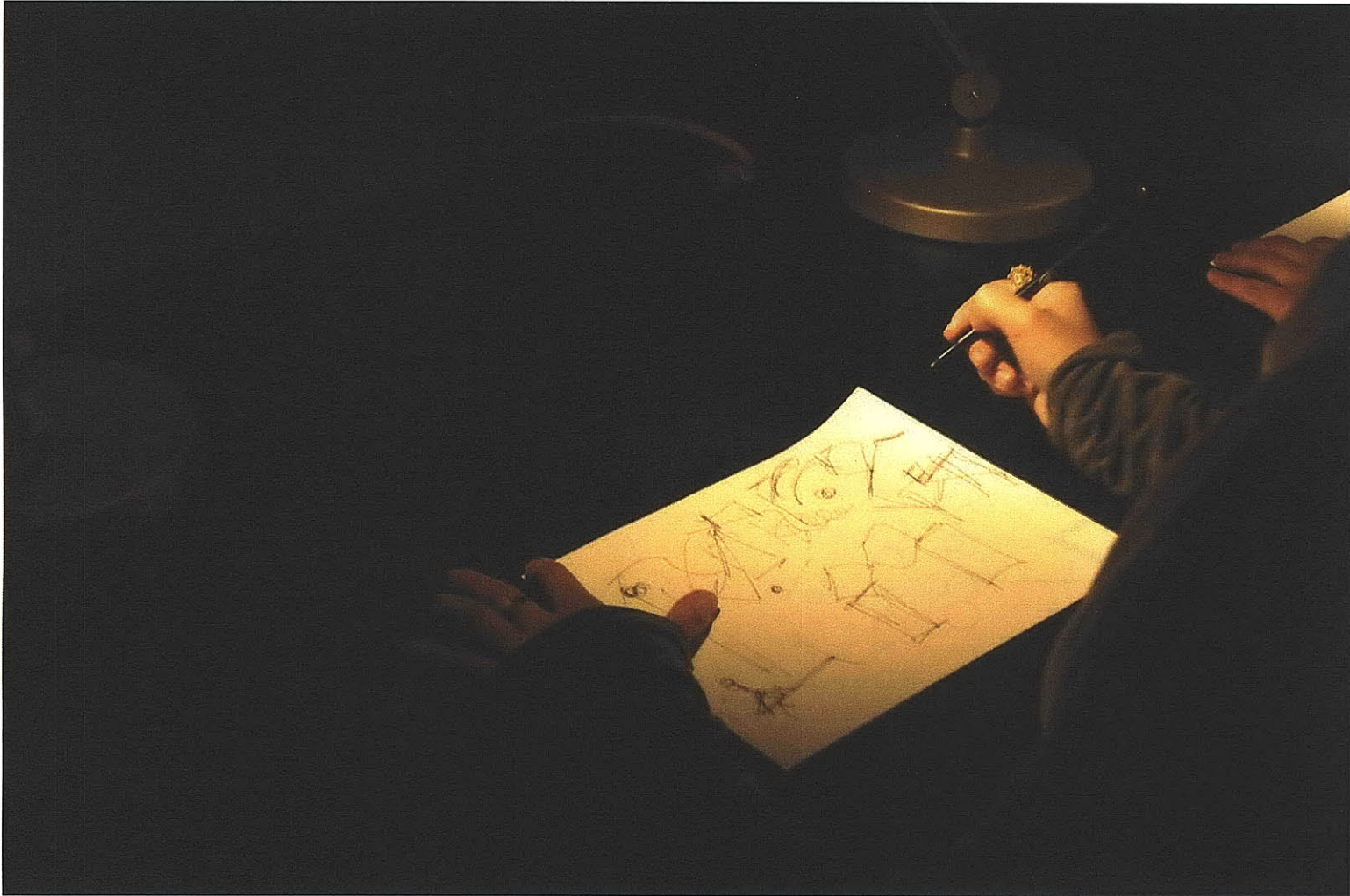
Program that deploys hundreds of small autonomous robots into a region of the ocean. These small robots constantly relay their position back to a command center which tracks and records their movement to study ocean currents. This is a prime example of remote sensing as used by oceanographers.





At this point thousands of images of the Teufelsberg radar station began cycling through the screens. The image on each screen changed at a rate of 0.2 seconds. They were arranged to function like an inverted film. In film, images usually move at 24 frames per second past a projector light source creating a sense of a moving image. In this case the images moved at a

similar rate through the space from the top right to the lower left of the VisWall.

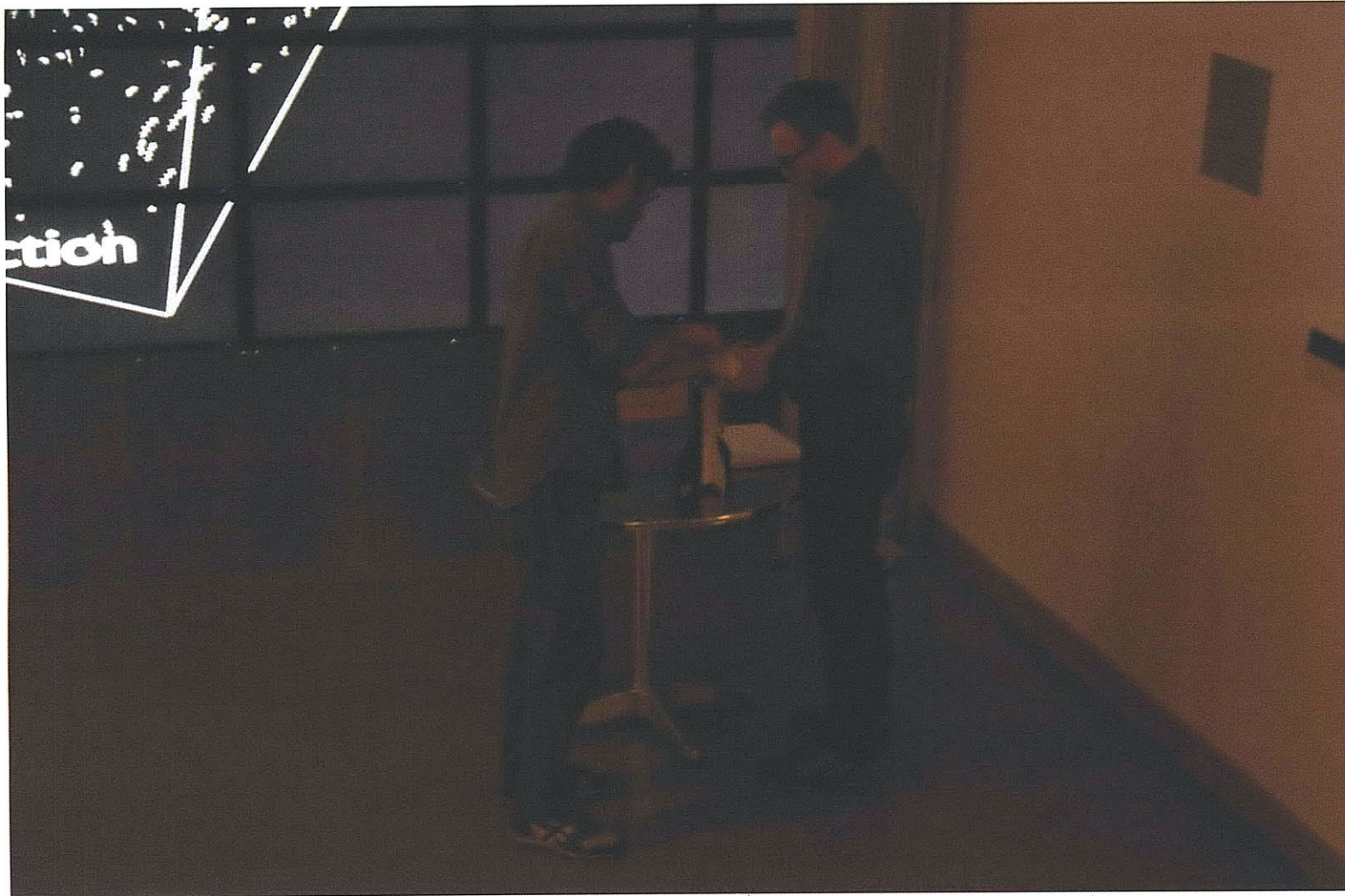


As these images began to shuffle across the screen so too did the assigned Remote Viewers begin to draw. They drew to piece together the thousands of photographic fragments into comprehensive drawings of the space. They were reconstructing the space from these fragments at the point of their reception through the act of drawing.



After nearly 20 minutes the Vis Wall was turned to an ambient screen of simulated bacterial flow in a cube. At this time I came over the to remote viewer's tables, and rolled up the drawings they had made.





Charles and I then proceeded to load these drawings into the nose cone of a model V2 Rocket.





These drawings were then carried outside to the adjacent amphitheater. The amphitheater was repurposed as a launch site for the rocket with its payload of drawings. The Teufelsberg Radar Station was successfully retrieved and reconstituted. Through the vast expanse of distance between the replica and the original a translation had occurred.



The space between the two has been occupied and we have proof- a set of drawings created by remote viewers dedicated to this task alone. However, our aim is to inhabit the space in between and not to fully materialize a replica. We stop the process short of completion only to reverse it. A rocket that inevitably made the Radar Station obsolete has arrived together with the structure. We loaded it with drawings and

launched it so that it might return to the oblivion of time and space that sits between the sites of MIT in 2010 and the Cold War Teufelsberg of the 1980's.

## ***The Technical Institute as Site for the Production of Meaning: MIT***

**Notes from the Visual Arts Program, MIT  
2008-2010**

### ***The Siteless Institute.***

MIT was founded in 1865 and has become the foremost model for a technical institute. It is at once educational, industrial, and military. Though founded in the wake of the Civil War it did not take the form we know today until it was given the resources and purpose of the Second World War. This was a period of massive technical innovation organized around a common effort of global war. The conditions of war did not subside after World War II, rather they were continued in and through the industrial, military, and educational production bound up together in the technical institute as the model for all civilian production. This meant that post-WWII, the rationale of constant preparedness, first strikes, and nuclear annihilation was imposed on all social life in the US and USSR though it took different forms.

In 1958 the newly appointed chairman of MIT, Gordon Brown, created a diagram for what MIT might become. This model was derived from the success of the Research Laboratory of Electronics at MIT or RLE. Founded in 1946, it was one of the first interdisciplinary research labs and was formed to execute purchase-order contracts from competing military branches.

The historian of technology Stuart Leslie relays that

“At the center of [Brown’s] drawing was the undergraduate school, surrounded by a series of concentric rings representing first the graduate school, then the various departments of science and engineering, and finally, swirling in from the circumference, the interdepartmental centers, all superimposed on a line drawing of the great MIT dome. Brown titled it ‘A University Polarized

Around Science' and intended it to illustrate how research generated in these centers would reinvigorate the Institute's teaching core... missing from Brown's map of the new MIT was any context, any sense of where the Institute stood in relation to the world outside. Beyond Brown's spheres lay one of far greater size and influence, dominated by the military and its industrial clients, that, like the prime mover of Aristotelian cosmology, ultimately translated its motion and meaning to that seemingly self-contained inner world. A truer portrait of MIT might have been title 'A University Polarized Around the Military.'" <sup>3</sup>.

Fueled by the production of military technology, the core of the Institute expanded to such remote areas as to create its own latent antithesis. In 1968, ten years after Brown's report, at the height of the Vietnam War the Center for Advanced Visual Studies (CAVS) was founded by Georgy Kepes who had left Nazi Germany to teach at the New Bauhaus in Chicago together with prof. Mies Van der Rohe. In his first report to the then president of MIT, Howard W. Johnson, Kepes described Center's mission as the development of an:

...absorption of the new technology as an artistic medium; the interaction of artists, scientists, engineers, and industry; the raising of the scale of work to the scale of the urban setting; media geared to all sensory modalities; incorporation of natural processes, such as cloud play, water flow, and the cyclical variations of light and weather; [and] acceptance of the participation of 'spectators' in such a way that art becomes a confluence<sup>4</sup>

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3 Stuart Leslie. 'A University Polarized Around the Military.' *The Cold War and American Science*. Columbia University Press. West Sussex, NY. 1993 p. 42

4 Kepes, Gyorgy. *Center for Advanced Visual Studies: Report to*

This 'confluence' was not so foreign to the fields of the 'polarized university' President Brown had described ten years earlier in his own report and which the CAVS inhabited.

In elevating the scale of the work of art to that of the massive military and industrial projects that pervaded MIT's curriculum, we must ask what is it exactly that differentiates a work of art from a work of technological progress? Certainly the projects that would fall under Kepes' description involve a type of technical novelty. The division of labor of producing the work could be ascribed to scientists and engineers, but if we extend the terms emerging in contemporary art at the time we can match his interest an artwork at the scale of the earth itself with emerging artists like Robert Smithson and the genre of Earth Work. Kepes, however, was reluctant to step outside of the bounds of the institute that supported his production in his writings. The result of this negotiation of interests was a complex form of institutional critique and collaboration.

Before we proceed, it is important to fully understand the character of the implicit critique created by a work of art that is produced by and sited in a technical institute it is important to first understand the parts that compose the technical institute. Here I will elaborate on the structure of the technical institute as it relates the the strategy of Replication in contemporary art:

### *What is Replication in Science?*

This thesis, *The Replicator*, describes the emergence of Replication in contemporary art. However replication is a process that forms the basis of law, molecular biology, information architecture, and the decorative arts. Replication belongs first to the scientific method where it is also known as reproducibility. In the essay "Son of Seven Sexes: The Social Destruction of Physical Phenomenon" H.M. Collins observes that a "successful outcome to an experimental skill is evident in a successful outcome to

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*the President, 1967-68*, p. 48.



an experiment, but where detection of a novel phenomenon is in question, it is not clear what should count as a 'successful outcome' – detection or non-detection of the phenomenon. Thus arguments concerning the existence of the phenomenon turn, not upon experimental results, but upon what comes to count as a 'well-done experiment'.<sup>5</sup> For an experiment performed by a scientist or a group of researchers to be considered a valid form of knowledge it must first be reproducible by any other independent researcher in any lab anywhere in the world. This researcher then occupies the position of verifying the knowledge, and also that the means by which that knowledge was produced, are valid. The practice of recording the process of an experiment together with a description of an experiment in full disclosure are just as important as the results achieved.

### *How is Fact Created?*

Full disclosure implies that the hypothesis, together with the steps taken towards experimentally testing that hypothesis, are reproduced in a document or lab report. This document serves as the object of scrutiny and the guide for reproducing the experiment, hypothesis, and results all together. Independent researchers must be able to reproduce this experiment in any other place or time. If the resulting values of these identical experiments are indeed identical then they are commensurate. The ascertained values can be deemed true. Fact is created.

The ability to arrive at these conclusions is dependent on consistency. But for consistency to exist it must take place in three different instances that are contingent on one another to the extent that they are effectively the same. First is the consistency of the process of production. Second is the consistency of the environments in which these isolated experiments are carried, out and third is the consistency in the availability of the values

guiding the experiment determined by the orthodoxy of full disclosure, which at once, verifies, distributes, and envelopes all other aspects of the inquiry.

### *What is a Technical Institute?*

This level of constancy is manifested at both the site of production and the site of reception of scientific knowledge. The degree of similarity between the site of reception and the site of production allows for the greatest degree of internal coherence. The technical institute has emerged at the forefront of this type of production. As a place of education and of technical research and production it is uniquely suited to produce and reproduce the conditions of production or reproduce the means of production.

It both produces and receives its own knowledge. The technical institute as academy has the added benefit of creating a level of coherent knowledge production that can allow for seamlessly transferring information from one disciplinary section to another. The classification that comes to replace disciplinary boundaries are classifications of levels of control marking each laboratory. The question becomes not about the laws that constitute the horizon of a particular scientific discipline but the extent to which the site for production, reception, and reproduction of knowledge can be created.

### *What is a Laboratory?*

The laboratory is a clean luminescent continuous surface which can register even the slightest inconsistency in its subject. This controlled environment follows rules that are not so different from the standardization of the modern gallery as a reflective space. However the character of the knowledge generated by aesthetic forms is radically different from the technical knowledge produced in laboratories – they are incommensurable. The relationship between the subject and the object in the laboratory is reversed in the gallery. It is the subject which is made feel the

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5 Collins, H.M. "Son of Seven Sexes: The Social Destruction of a Physical Phenomenon". *Social Studies of Science*, Vol. 11 No. 1 (Feb., 1981), p. 33 and p. 62



effects of change that the object elicits; in the laboratory the object is effected in isolation. In the laboratory, the time an object is subjected to a condition is isolated and time is treated as an essential measure of change. In the gallery time is a variable of change not a unit of measure. This is to say that in the traditional gallery the viewer is the actual object of reflection via the object reflected upon while in the laboratory the object of reflection is sustained as the object affected<sup>6</sup>. The technician maintains constancy while in the arts the viewer and the artist alike are subject to the object created.

### *Novel Phenomenon.*

Collins states that “where detection of a novel phenomenon is in question, it is not clear what should count as a ‘successful outcome’ – detection or non-detection of the phenomenon.”<sup>7</sup> The orthodoxy of artistic production and reception hinges on the idea that in a gallery every phenomenon is a novel phenomenon. Scientific inquiry seeks to isolate novel phenomenon and master them by reproducing them at will while artistic production engages in the production of extended novel phenomenon and attempts to sustain this state. From the standpoint of technical production, art is one giant novel phenomenon with no immediate application to instrumental use.

### *The Scale of the Institute.*

At the Center for Advanced Visual Studies at MIT Gyorgy Kepes proceeded to create works at the level of atmospheric phenomena, no single vantage point could hold this type of art object. While

At MIT Kepes produced a series of works under the project *Sky Art*. Massive inflatables shaped like mushroom clouds or flowers in bloom hovered about the MIT Campus and a bridge was created over the Charles River between Cambridge and Boston. Kepes’ work also included explorations into light such as *Center Beam* a large tunnel of laser beams, steam reflective surfaces, and sound. All of his works entailed and emphasized transdisciplinary collaborations with CAVS fellows and students and professors from across MIT.

The summary view of a plan perspective would be the obvious choice. However it was only a few years earlier in 1961 that the USSR first put a single man, Yuri Gagarin, into space, closely followed by John Glen aboard Friendship 7. It took the entire national infrastructure of the largest super-powers the world had ever seen to place individual men into space to peer down at the natural phenomenon that Kepes had described as his material for the production of art. Kepes’ and others working at the CAVS were enabled by technology created in labs just across campus from the CAVS; it was out of the question to put art into outer space until at least twenty years later.

In 1988, a CAVS Fellow, Lowry Burgess, created *Boundless Cubic Lunar Aperture*. It was the first artwork NASA agreed to transport to outer space and the moon. It consisted of two nested sets of boxes. One set was returned from space to rest at the DeCordoba Museum in Lincoln, Massachusetts, while the other set was left in the Korolev Crater on the dark side of the moon. The boxes are covered in mythological holograms and Burgess describes them as “a labyrinthian keyhole through Void, framed in fractured and fused cancellations, a dread knot.”<sup>8</sup> Through the veil of language and the smuggled attempt to jumpstart the long-dead symbolic form, we can be sure that the central representational move of this piece consists in the direct link between the two boxes which differ only in their sites. By virtue of their shared existence, in looking at the DeCordoba box a viewer’s consciousness is

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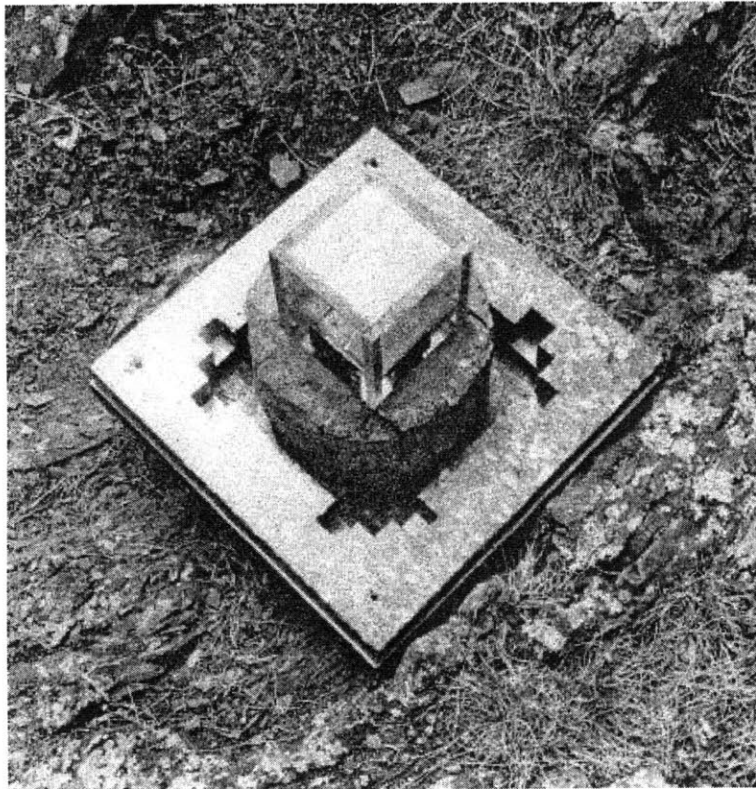
<sup>6</sup> Comic book character’s are often produced when the division between the experimental object and technician are transgressed. The fly stumbles into a genetic chamber. A spider falls into a radioactive beam, biting and changing the technician into Spiderman.

<sup>7</sup> Collins, H.M. “Son of Seven Sexes: The Social Destruction of a Physical Phenomenon”. *Social Studies of Science*, Vol. 11 No. 1 (Feb., 1981), p. 33 and p. 62

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<sup>8</sup> *Whole Earth Review* issue 48. Fall 1985. p. 26-31.

displaced and distributed between the box cognized and the box that could be cognized on the dark side of the moon.



Lowery Burgess. *Lunar Cubic Aperture*. 1988

*The Social Destruction of Fact through the Artistic Strategy of*

### *Replication.*

Artwork, however, is no longer bound to the gallery. It has been freed from the gallery for at least 70 years now. A condition of this release is that outside of the Gallery an artwork is made to site itself; it must declare its existence in a site or as a site if it wishes to have an audience at all and often times must declare who specifically this audience is as part of its composition. However, when an art work sites itself within a laboratory an inversion occurs. The laboratory is no longer used to study a phenomenon in isolation. Instead the laboratory is used to produce novel phenomena that have no apparent reason to be reproduced in any lab anywhere else in the world. Art appears as a socially necessary form of production by virtue of its persistence and proliferation but still rejects a categorical use value that would a priori validate the production of anyone art object. In this way it forms a window onto the entire world of commodity production which assumes a demand or destination of a product even before it is created.

The entire technical apparatus is turned towards producing aesthetic knowledge and in the context of the laboratory this aesthetic phenomenon is, in effect, the transformation of knowledge into non-knowledge. It is the destruction of consensus not the establishment of it. Consensus can be spoken about in the context of society of which both science and art are particular expressions. It follows that in the specific context of science it is the social destruction of fact we are speaking of, which in the same moment, in the context of art, is the creation of an artwork.

In the laboratories of the Massachusetts Institute of Technology (MIT) I experienced this divergence first hand. The attempt to use these labs as sites for the production of meaning - labs which would otherwise carry out technical research - created an interruption in the continuity knowledge that is their purpose. The continuity of scientific research carries on through time as the accumulation of knowledge, but in the increased rational organization of immaterial forms of labor, the model of the

interdisciplinary research institute proliferates throughout social life, just like its products.

At this point I would like to take an interlude to present my first major project, *Shamshir+Windtunnel=Progress*, executed at MIT as a Masters of Science in Visual Studies (SMVisS) Candidate. Many of the statements above are derived from my first hand experience and insights gained while working on this project.

In preparation for this project I spent over three months observing activity in the Wright Brothers Windtunnel which is part of the Aeronautics and Astronautics Department at MIT before I proposed my project: to create and indefinitely suspend the moment of mid-swing of a sword.

# Shamshir+Windtunnel=Progress

Haseeb Ahmed  
Visual Arts Program-MIT  
2008-09

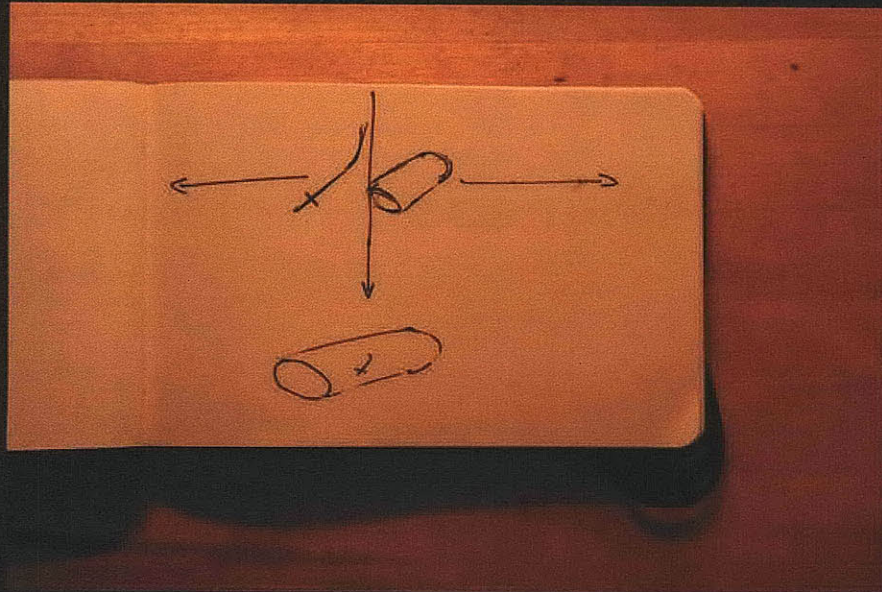
In conjunction with:



This project was executed in three stages over the course of the 2008-09 school year.

1. **Foundation:**  
Development of Conceptual and Historical Basis
2. **Test:**  
on 4.24 we tested the Shamshir Sword in Wright Brothers Windtunnel.
3. **Translation:**  
A sculptural installation at Mills Gallery aimed to simulate and document the project.

Shamshir+Windtunnel=Progress  
An trans-disciplinary research project.



Initial drawing of continuum.

In the fleeting moment in the middle of the swing of a shamshir sword sustained through the Wright Brothers windtunnel a linear history is constructed extending into the past and future from the present.

As a vortex of smoke forms off the razor edge of the sword a straight line through history is forged extending both directions from the present. Each object plays its part: the replica of a 16th century sword, the Shamshir points backwards through history while the Windtunnel is where technology is born and matures steadily into the future.

Both sword and windtunnel are bound together integrally in the action for which both are essential. The tunnel as a technical object and the sword as an index of dead culture transform one another. The sword regains its technical function in the action of cutting while the tunnel is finally rendered as a metaphorical object after giving form everyday life but remaining unseen.

This linear history is constructed in order to throw the present from which it originates into relief. The conception of History as a continuum is does not amount to the existent potential for overcoming it.



The Shamshir sword was purchased at kultofathena.com which caters to the LARPER (Live Action Role Playing) Community.

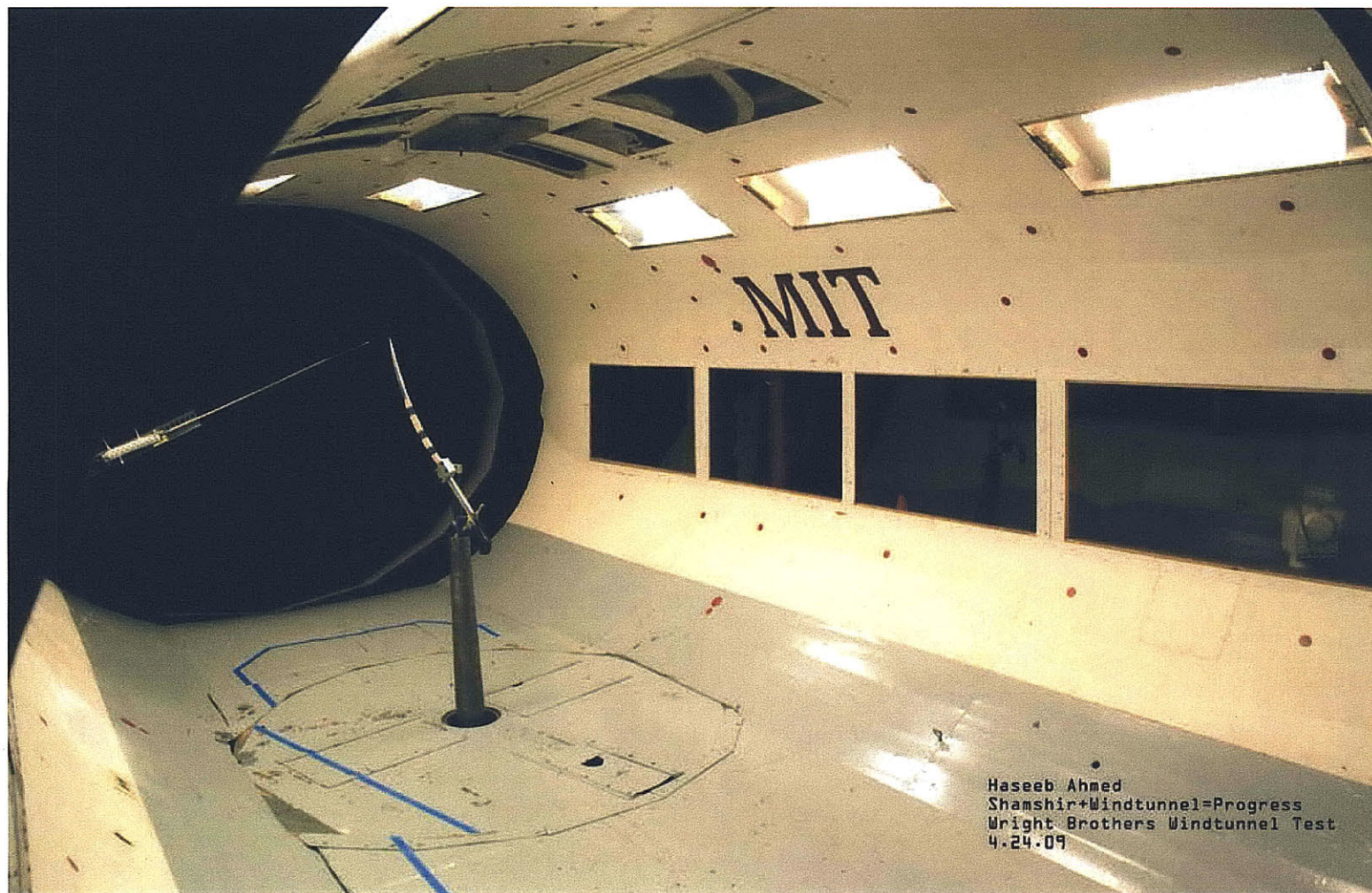
Today its function is to fulfill a desire to circumvent a half century of change.



"Battle Ready" in general "Battle Ready" swords are functional weapons that will live up to actual combat or reenactment usage. However, "Battle Ready" does not mean indestructible. Any sword can be broken. Use common sense with your sword, and it will last for generations. A sword being listed as "Battle Ready" does not constitute a guarantee that it will withstand any abuse you can throw at it.



As an infrastructural technology the Wright Brothers Windtunnel has played a formative role in everyday life. Everything from bike helmets to missiles have been developed there. Here is an example of a test conducted in 1994 to correct a design flaw in virtually every traffic light in the US. The phenomenon of *mast arm dynamic oscillation* would eventually lead to a structural failure.







#### 4.24 Test Day of Truth:

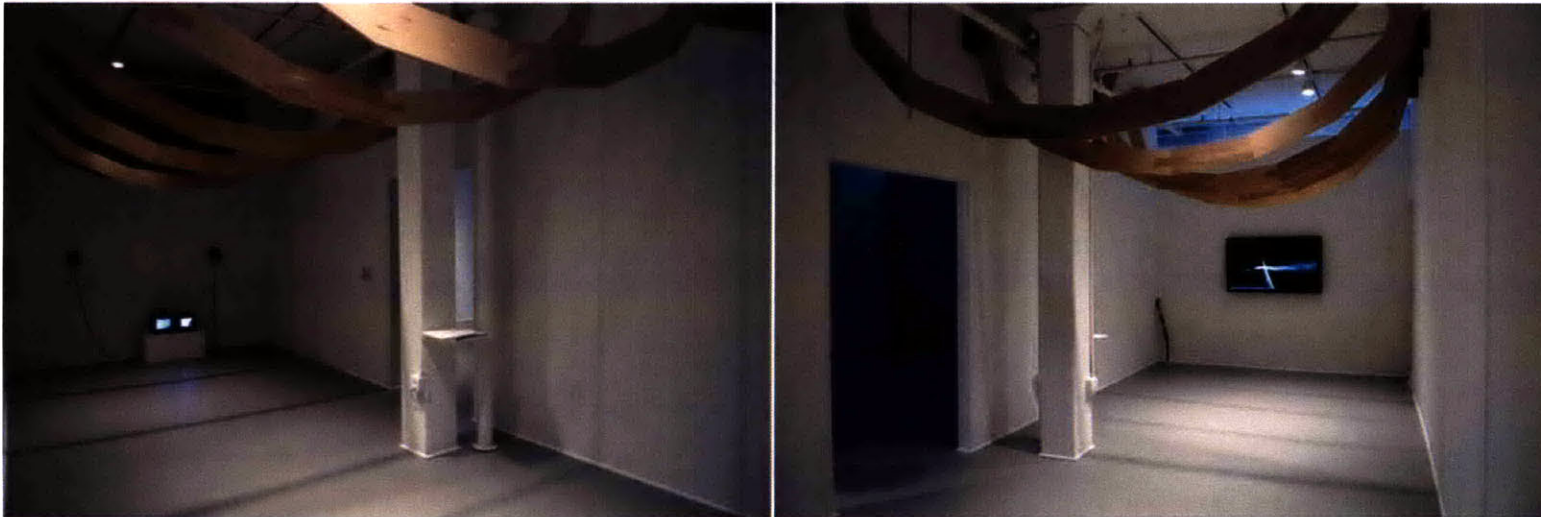
A group of Faculty and students from across MIT were invited to witness the test.

Most of these people had never been in a windtunnel so the test took on another function of a knowledge exchange about the infrastructural technologies that shape every day life.

During the event we used a laser wall and smoke to visualize a vortex created by the tip of the sword as it cut through the air.



Haseeb Ahmed  
Shamshir+Windtunnel=Progress  
Airflow\_Vortex Detail



The didactic Wall text reads:

**Haseeb Ahmed**

***Shamshir+Windtunnel=Progress*, 2009**

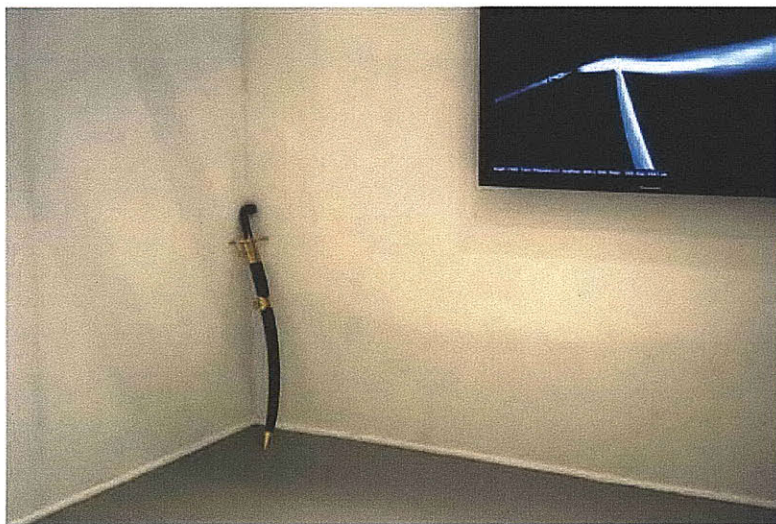
Installation including, video, sculptural elements, and a Shamshir sword

On April 24th, 2009 the artist performed an experiment at the Wright Brothers wind tunnel at MIT, in which he suspended a Shamshir sword in the center of the tunnel, then created wind conditions that froze the sword in mid-strike indefinitely.

For this exhibition, Ahmed has installed an elliptical wood structure similar in size and shape to the bottom of the tunnel, transforming the space of the gallery into the underbelly of the site of his experiment. A closed circuit TV displays a real-time image of the space. An adjacent Monitor shows footage from the April experiment and speakers play the sound of the wind from the event.

On the opposite wall, a monitor plays high speed, hyper detailed video of the same experiment, using smoke to make the wind itself visible. The black ellipse (here, painted on the wall) represents the source of the wind, toward which all objects tested in the tunnel are perpetually moving.

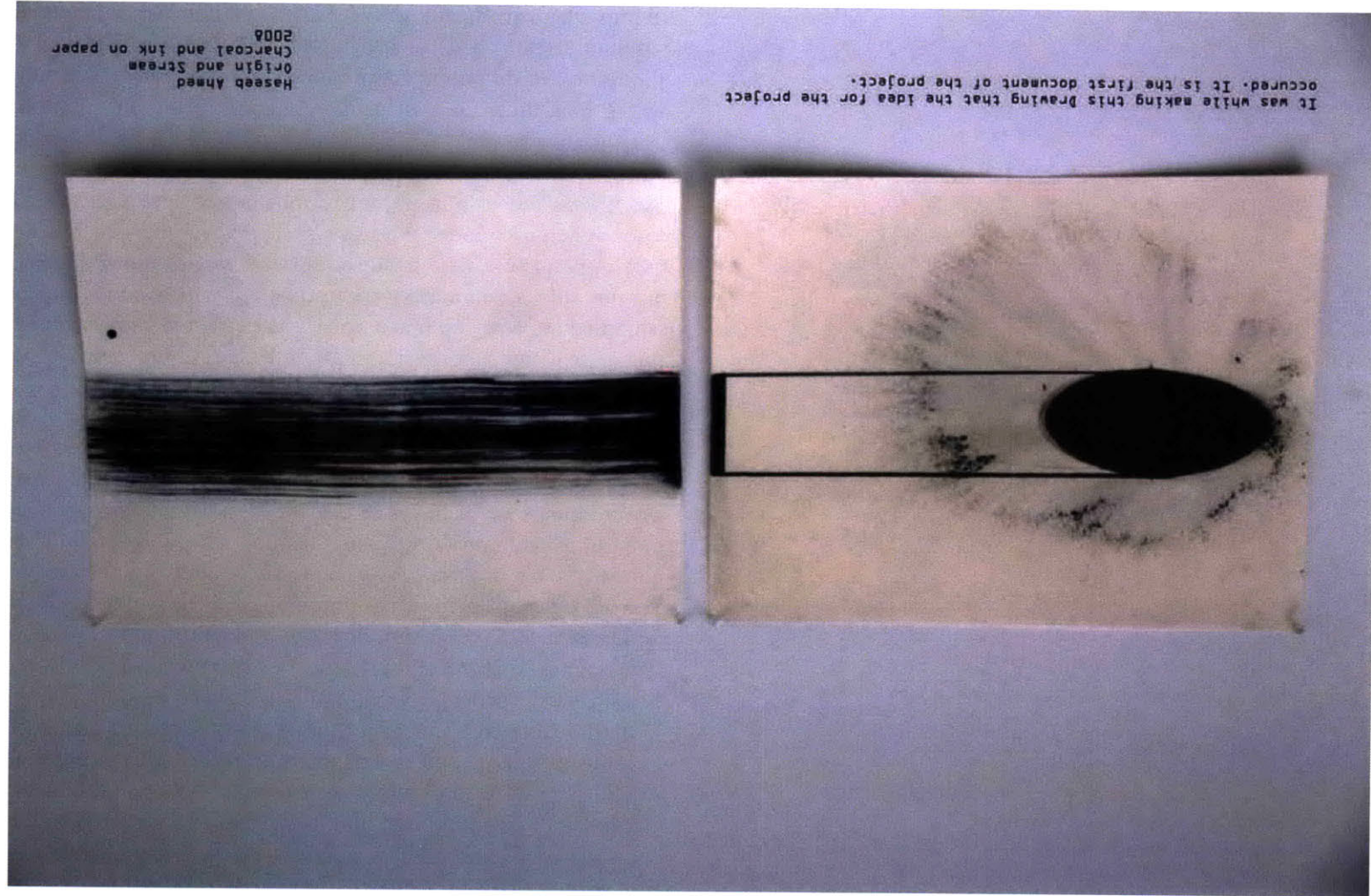




Detail of Highspeed video and sword



Detail of Black Ellipse, closed circuit TV with test video and speakers playing sound from test



*Shamshir+Windtunnel=Progress* does aim to create a replica. The artwork is sited in a laboratory designed to produce knowledge that is reproducible in any other laboratory at any time. The entire field of aeronautical engineering is reliant on testing and verification in a wind tunnel. The project mobilizes this infrastructure towards the creation of a moment that does not directly contribute to the continuum of reproducible knowledge. However, when I was confronted with question re-presenting this event in the context of a gallery, I had to find a way to reproduce the experience of moment of an infinite cut, possible only in a windtunnel. I resolved this question by creating an installation that was part documentation and part simulation of the test that occurred in the tunnel. The installation featured a scale structure of the Wright Brothers Windtunnel partially descending into the space of the gallery, the actual sword used in the test which was a replica of a 16th-century Shamshir sword, and sound and video documents captured of the test. From the standpoint of artistic production, this project sought to create a moment that was completely overloaded with symbolic and representational possibility.

The sword, ubiquitous throughout the Islamic world and representations of the Islamic world could describe the perpetual violence and war that the Middle East experiences. This is if the objects are interpreted as composing a static image. The test, however was not static. It was a visceral experience of the force of wind, the roar of the tunnel, the whistle of the sword, and the formation of a changing vortex. Those who experienced the test described it as standing at top the very point of the highest mountain summit. In the moment the sword cut through the air all of the representational connotations bound up in the objects gave way to the way they performed in space and as material qualities. If the moment of the sword cutting through the air created a historical continuum, the replica shamshir pointing backwards through historical time and the wind tunnel pointing into the future as the incubator of technology, it also extended horizontally from the disciplinary boundaries of engineering to

the disciplinary boundaries of artistic practice. The moment that the sword was locked in a perpetual cut through space functioned like a zero point for all of these things – an autonomous event.

## *Some Origins of Replication in Contemporary Art: 1968*

At this point I would like to elaborate on some of the origins on Replication as a practice in contemporary art. Taking excerpts from writings by Robert Smithson, Hélio Oiticica and Gyorgy Kepes, I will elaborate on two seemingly divergent, but deeply connected tendencies, both taking form in the year 1968. One tendency, represented by Robert Smithson and Lowry Burgess, attempts to keep pace with technological production and the speed of transport and communication infrastructures. Burgess, Kepes, and Smithson do this by cultivating an expanded sense of language that takes place between multiple sites simultaneously with the aim of preserving and experiencing the 'truly abstract'. This tendency expands consciousness outwards into geographic space. The contemporary practice of replication develops techniques of spanning vast quantities of temporal and spatial

distance while maintaining a coherent experience of the work of art. By stretching the structure of the metaphor and placing it onto geographic space itself, these artists are attempting to establish a language composed of the physical world itself.

On the other hand, we have a movement represented by the Brazilian Neo-Concretists that appear to abandon metaphor altogether as a means of communication in favor of direct effect. Instead of moving outwards into space and superimposing onto it a conceptual order, the Neo-Concretists, as represented here by Lygia Clark and Hélio Oiticica, turn towards the expanse of psychological space. They develop individualized and communal forms of participation as artworks. This work is an apparatus for the journey directly inwards into the consciousness of another. From the artists working during the totalitarian Vargas Regime,



we also gain an understanding of how the social situation surrounding the production and reception of an artwork can deeply condition the character of a work of art and its concerns.

Smithson/Kepes and Oiticica/Clark appear to represent two contradictory but co-existent forms of practice. However, both are attempting to construct immediate forms of transportation as art; the former into the expanse of physical geographic space and the latter into the deep expanses of psychological space. Replication as a form of artistic practice relies heavily on the selection, displacement, and reconstitution of objects over vast territories. The key difference between the contemporary form of practice and its predecessors is that for the replicators, a site is constituted in equal parts of its social/historical character and its physical/geographic position. What were divergent practices in 1968 reveal themselves today to be two halves of the whole joined through replication as an artistic practice.

1968 was the year the New Left culminated in global strikes and protests. The New Left is still today the most recent upsurge of organized political activity aimed towards the constitution of a new form of social life. In the present moment the possibility of an emancipatory politics appears to have faded completely from view and here we see the explicit interest in historical objects for replication. When taking a historical object for replication the artist aim is to throw the present into relief by the sheer force of superimposition. Replication of technological forms continues to stave off the determination of social life brought on by automatic production and reproduction of both the objects produced and the means by which they are produced – machines and people.

Lastly we introduce an excerpt from Theodor Adorno writing at the height of WWII. Adorno emphasizes in *Reflections on Class Theory* that in the movement of the dialectic from there are two elements that must be held in tension. Here he is attempting to maintain theory in the face of its failure to grasp and prevent the rise of fascism and the wholesale slaughter of the European

proletariat on the battlefield and the Jews in Holocaust. For Hegel the dialectic was the movement of Spirit clarifying itself and overcomes its previous form towards a form more adequate to its being. Similarly the predecessors of replication presented here all emphasize the point of arrival and lose sight of the point of departure in the movements they are constructing through works of art. Adorno insists that it is 'the static side' of this movement that must be maintained in and through intellectual labor. By holding the two, the state being overcome by a state of future being, in tension a register for continuity and change can be created. In the practice of replication a tension must be maintained between the site of origination and the site of reception. The insistence on only the forward movement of the dialectic creates a positivistic world view that can be ascribed to the Italian Futurists eagerness for WWI or the *raison d'être* of the technical institute of MIT to the extent it accumulates vast amounts of capital investment from cultural, industrial, and governmental agencies. Through the artwork as replica the existent world is made to confront its own image and account for it.

### *Replication as Teleportation.*

Contemporary artists following the strategy of Replication borrow from the earlier works of Robert Smithson, Gyorgy Kepes, Lowry Burgess, and others working across disciplines and in the genre of Earth Works. In replication an object is recreated that is historically or geographically remote or both in the present. By looking at the replica one is immediately transported to a place and a time one has never been. What differentiates the contemporary work from their predecessors is that they include and focus on historical time as conflated with geographic distance. As we will see, the predecessors of replication are almost exclusively concerned with geographic distance. Burgess' boxes are essentially replicas of one another and they are geographically remote. Burgess in this work is a predecessor of replication as known today in contemporary art. Today we understand a site to be a deep confluence of historical and geographic distance.

The strategy of Replication in contemporary art is aimed at superimposing a temporal and geographic specificity that ruptures the rational generality that is the organizational logic of our world.

***Replication: Towards the Reconstitution of Metaphor in Art.***

The ethos of direct action and spontaneity born of the political moment of the New Left in 1968 included the rejection of metaphor as a contemplative, and therefore useless form of artistic production, and as an essentially a bourgeois form of art. Replication starts from the beginning to reconstitute and redeem metaphor as a form of artistic practice while not taking for granted the strategies of social intervention and public practice also borne in the late 1960's.

We know today that sites are not composed of geography alone. Rather it is the simultaneous recognition of historical time and geographic location that gives them their specificity. The artwork as metaphor reproduces the basic structure of a metaphor quite literally. The root meaning of metaphor is to "to carry over", "to transfer" while meta is "between" and phero is "to bear, to carry". Artworks that insist on literally transporting one site to another as semiotic form the question 'what exactly is being displaced into the present?

What is it that is being transported or can sheer quantity of the distance traveled override the requisite of content in the relationship of form and content needed to specify the product as an artwork. This assumes the artwork as operating beyond the mass (industrial and cultural) produced commodities that attempt to efface the separation of form and content or subject and object in their reception. Rather, mass produced commodities aim to create an identity between the consumer and the commodity by anticipating and fulfilling desire. Kepes' works appear as pure forms over Boston's skyline. However, because they are constructed on site by the audience they start to take on a defacto

facto social content and in this sense meaning. But without the internal relationship of form and content that gives each work its specificity, in what ways do Kepes' works really breach the centripetal force field of President Brown's Institute?

***The Ends of Participation: Establishing a Common Language and Collaboration.***

Arterial connections between disciplines extended the laboratory beyond its disciplinary boundaries and Brown's site-less university formed a radial plan through which resources, human and material, could be circulated and returned with minimal loss through entropy. Meanwhile, Kepes' made recourse to a social infrastructure through which natural phenomenon and social phenomenon were bound together. Kepes did this by the 'acceptance of the participation of spectators' along conditions 'geared to all sensory modalities'. By applying previously unseen forms of technology like lasers, holograms, and massive inflatable structures, or state-of-the-art technologies, Kepes sought to constitute a social body bound together by a new form of sense perception, induced and immediately affirmed by the critical mass of individuals present and 'participating'. However, the first audiences for Kepes' work were those who helped produce the work. This included spectators yes, but also collaborators from a variety of disciplines. In order for this collaboration to take place, Kepes had to find a common language that could communicate the reason for production across disciplines that had very different reasons for creating objects of inquiry.

Participation is useful for Brown insofar as it maximizes the human resources the Institute has gathered. At MIT, during Brown's presidency professors often taught in multiple departments at the same time. However, the usefulness of participation for Kepes indicates a critical mass needed to create new forms of sense perception which can only happen collectively and not in isolation. This sense perception is treated as an end and the artwork as a means to that end. While Brown seems to

be concerned exclusively with a increasingly efficient educational and industrial structure, there is in no end to the means of Brown's institute. By applying the apparatus of the Institute towards an immediately social goal Kepes was able to develop a mastery over the technical apparatus of MIT. When compared to Kepes' work, the rest of MIT was began to appear to exist only as a means of national and industrial advancement. While Kepes' production originated from MIT it could not return back to the institute for further development.

Kepes' artworks were readily was accessible by all, first at the public site of creation and reception that was the artwork, then as open access documentation. The technical institute became a site for the production of meaning as opposed to anonymous, reproducible technical knowledge. This form of production essentially undercut Brown's measures to ensure minimal loss of energy and resources in the site-less institute.

Even after the world wars, and the Korean War which initially called for and enabled Brown's Institute had subsided the US military and industrial complex continued to call upon the Institute. Paul Virilio attributes this to the shift from war-time economy to the military-industrial complex<sup>3</sup>. The difference between the totalized military-industrial complex and the temporal war-time economy was learned in the wake of the atom bomb over Hiroshima and Nagasaki; No longer a matter of sheer quantity in national armaments, the instantaneous destruction and the means to deter it became the motive force of technological development. Artworks developed in the US at this time had to confront and operate at the level of this social situation. By creating moments of disruption and sensorial teleportation artists sought to master this language of instantaneity.

In 1968, the same year that Kepes delivered his report, Robert

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3 Virilio, Paul. *Pure War*. Los Angeles: Semiotext(e), 1998 p. 143

Smithson, the champion of entropy, wrote,

To understand this language of sites is to appreciate the metaphor between the syntactical construct and the complex of ideas, letting the former function as a three dimensional picture which doesn't look like a picture. "Expressive art" avoids the problem of logic; therefore it is not truly abstract. A logical intuition can develop in an entirely "new sense of metaphor" free of natural of realistic expressive content. Between the actual site in the Pine Barrens and The Non-Site itself exists a space of metaphoric significance. It could be that "travel" in this space is a vast metaphor. Everything between the two sites could become physical metaphorical material devoid of natural meanings and realistic assumptions. Let us say that one goes on a fictitious trip if one decides to go to the site of the Non-Site. The "trip" becomes invented, devised, artificial; therefore, one might call it a non-trip to a site from a Non-site.<sup>4</sup>

Here we see Smithson sharing major points with Georgy Kepes and with Lowry Burgess whom he had never met. The distribution of an object across remote geographic terrain entails a 'travel' that is in fact a way of constructing a 'new sense of metaphor'. This metaphor is not 'expressive' but logically sound enough to withstand the pressures of such an immediate journey into deep space. The ability to understand that this journey is taking place requires a new type of language to describe this new type of sensory perception. Furthermore, this sense perception is not necessarily a product of the artwork by itself.

Smithson is talking specifically about the speed of air-travel and geographic distance, and Burgess is using astronomic travel

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4 ed. Flann, Jack. "A provisional theory of Non-Sites." *Unpublished Writings in Robert Smithson: The Collected Writings*. University of California Press: 1996

and geographic distance in his artworks. In either case it is a technological development that has elicited an experience and now that this experience exists, it is being elaborated into a semiotic language by artworks. This is motivated by an attempt for artworks to keep pace with or anticipate the world of experience constituting the everyday. There is a latent fear that if these experiences are not elaborated into a language then they would become sublime experiences without the hope of apprehension by anyone actively involved in directing or organizing the activity. Every time a person would fly or even hears of space travel they would be held in a state of mystification with no way of addressing the experiences they themselves have had. Everyone would understand only small slices of the world they are actively involved in making. In Air travel- it would be the pilot, in the institute the board of directors.

Smithson points towards the already existent world for examples of massive social works that art must mobilize lest it be overcome by unconscious civil and technical production. Just as with Lowry Burgess, Smithson mobilizes vast expanses of land and mental space to eliminate the boundaries between lived experience and mental life. A result is that both 'the site of origination' and 'the site of destination' are swallowed up in the wake of this movement leaving only 'non-sites'. The site of production is the movement and distribution between the sites of reception and production itself. This is all in the powerful drive towards the 'truly abstract' and the sensory faculties needed to experience it. Within the 'truly abstract' the entire world is rendered as the idea of movement that eliminates and undercuts physical movement itself by creating a means to fully anticipate its effects. However the goal is not the creation of the 'idea as an object', as it is for the emergent conceptual artists who are the contemporaries of Smithson, Kepes, Burgess, and Brown. The art object gives form to the transit of communication and therefore must entail a type of transportation.

### *Language of Transit.*

In any trans-atlantic flight we would take today we would know we have already arrived before we have even departed. Arriving at the airport we check the departure time of our flight under the name of the destination on the tele-boards located in every terminal. This tele-board functions as a wall text for an immanent performance. Only didactic first-hand accounts remain to describe the event after the fact. 'I flew from Amsterdam-Schipol to Boston-Logan and departed at 1:50 p.m. Arrived at 2:30 p.m. the same day. However, I was in the air for 8 hours and forty minutes not one hour and forty minutes'. This is the type of non-journey that Smithson describes: the speed of transportation paradoxically produces a type of inertia.

Even before one departs one knows the point of arrival. Even before one travels through space one is anticipating traveling through space and therefore traveling through space. At the point of departure, one is already at the point of arrival because of its inevitability. The certainty bound up in transcontinental travel creates an experience of inertia. The anticipation of transportation creates sites of inertia in transport hubs. Airports, train stations, and bus depots, all contain within them every point to which they are connected. A person standing in a terminal without an itinerary is perpetually stuck in a realm of possible movement in any direction without the ability to realize it. Each airport, depot, and station is extremely similar in form because they anticipate and receive one another. The physical reality that we inhabit is at once expanded far beyond the bounds of comprehensible distance while maintaining the human body as its essential unit. The functioning network is a language that literally carries subjects and objects as grammatical subjects and objects. Beyond the language of logistics, there has to emerge a language that gives form to the consciousness distilled in transit. Transit must be reproduced without actually being in transit.

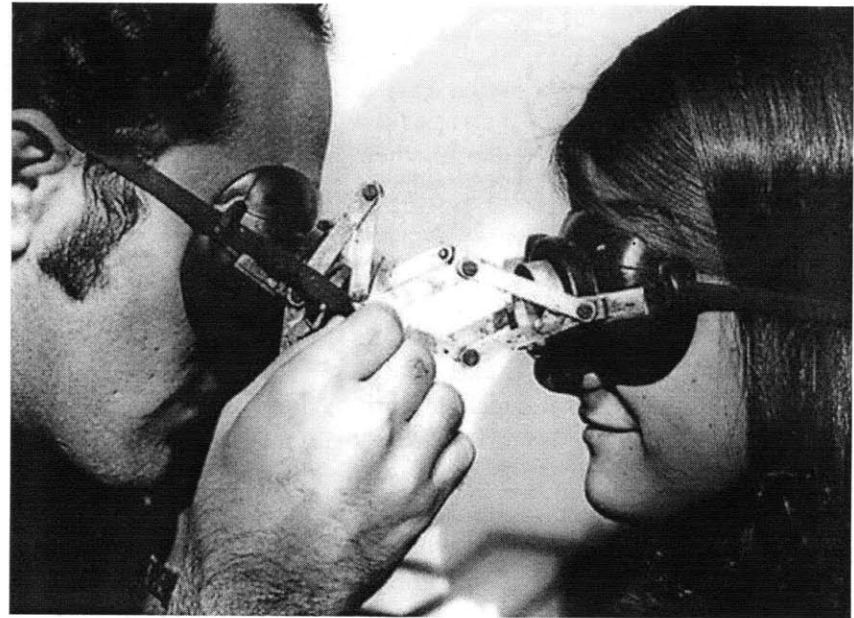


Smithson indicates between is a social project of language is to be 'appreciated' and understood. A language cannot be spoken alone. Among Smithson and Kepes an internal consensus can be arrived at. This consensus is that the form of 'sense perception' capable of experiencing the 'truly abstract' is in fact of immense social importance. Though Kepes is more explicit, both of these authors are registering the immediate necessity of 'participation' in this project as immanently social as the immediacy of sense perception itself: that this is the way 'we' are experiencing the world and, in turn, the type of world that will be built around this type of sense perception. Smithson and Kepes focus on advanced technology because they assume that there is a lived social experience that is more advanced, or needs to be more advanced, than the bounds of material reality that society creates for itself. People are more advanced than the world they produce. While civil production is regulated by codes based on a dissemination of a regulated language, artistic production gives form to latent codes not yet articulated or given form. However, what if each the conditions of reality that these works seek to depart from produce adversity to, or suppress the ability of an artwork to come into being?

*The Abandonment of Metaphor for Direct Effect.*

In 1968, the same year as Kepes and Smithson's texts, Hélio Oiticica confronts a very different social situation. In the midst of the dictatorial Vargas Regime he contributes a pragmatic piece of writing entitled the "General Scheme of the New Objectivity". In it he describes that,

There is currently in Brazil the need to take positions in regard to political, social, and ethical problems, a need which increases daily and requires urgent formulations, since it is the crucial issue in the creative field: the so-called plastic arts, literature, etc...



Lygia Clark, *Dialogue*, 1968. (Photo: Huber Josse)

There are two ways to propose a collective art: the first would be to throw individual productions into contact with the public in the streets... the other is to propose creative activities to the public, in the actual creation of the work. In Brazil the tendency towards a collective art is what really concerns our avant-garde artists...

In Brazil, the roles take on the following pattern: how to, in an underdeveloped country, explain and justify the appearance of an avant-garde, not as a symptom of alienation, but as a decisive factor in its collective progress? How to situate the artist's activity there? The problem could be tackled by another question: who does the artist make his work for? It can be seen, thus, that this artist feels a greater need, not to simply to "create," but to "communicate" something which for him is fundamental, but this communication would have to be for the large-scale, not for an elite reduced to "experts," but even "against" this elite, with the proposition of unfinished, "open" works. This is the fundamental key to the new concept of anti-art.

The old problem of "making a new art," or of knowing down cultures, is no longer formulated in this way – the correct formulation would be to ask: what propositions, promotions and measures must one draw upon to create a wide ranging condition of popular participation in these new open propositions, in the creative sphere to which these artists elected themselves.<sup>5</sup>

The direct honesty of Oiticica's text allows us access into the symptomology that can be identified in each of the author/artists

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5 Oiticica, Hélio. "General Scheme of the New Objectivity." *Conceptual Art: A Critical Anthology*. ed. Alexander Alberro and Blake Stimson MIT Press: 1999.

I have discussed. It also introduces a tendency that today still operates under the term participation: towards direct action, direct communication, and direct effect. This tendency developed as a response to a violent and highly repressive dictatorial regime and is now is one of the most prevalent forms of art practice or what we call 'socially engaged art practice', 'public practice', 'relational aesthetics', or 'participatory art' Oiticica explicitly states that this is a form of anti-art. Anti-Art, following the form of Oiticica's model, continues today and is wide spread, however, it is continued without the explicit title of Anti-Art. It is Oiticica's degree of self-consciousness that is missing from contemporary practices.

In another text entitled "Appearance of the SupraSensorial" written just one year earlier Oiticica states "Art is no longer an instrument of intellectual domination, can no longer be used as something supreme, unattainable, as pleasure for the whisky drinking bourgeois or the speculative intellectual. The only art of the past which will remain is that which can be apprehended as direct emotion what can release the individual from his oppressive conditioning, giving him a new dimension which only responds to his behavior"<sup>6</sup>. At this time the Vargas Regime had not only siezed military and civil control but did so with consent by the bourgeoisie of the nation, as is often the case in military coups. In the attempt to maintain civil order, preexisting art institutions were preserved to demonstrate a sense of continuity – this was done over and against the practice of many artists living and working at the time. In looking at the work of another Neo-Concretist, Lygia Clark, we can begin to approach what this might look like.

Lygia Clark's piece *Dialogue* is composed of two sets of glasses mechanically connected to one another with metal scissor joints. The pair who wear this apparatus can move but only towards one another. Their eyes are literally locked to one another. The piece

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6 Oiticica, Hélio. "Appearance of the SupraSensorial." *Art and Theory: 1900-2000*, ed. Charles Harrison, Paul Wood. Blackwell Publishing: 1993

allows for what Oiticica calls “the expansion into [the] individual’s consciousness”<sup>7</sup>. The movement of visual perception continues past the eyes of an other into the inner-realm of consciousness itself as an unrestrained form communication. In the case of Burgess *Cubic Lunar Aperture* and Smithson’s theoretical writings visual sense perception allows for instant transportation from one location to another. There is a focus on the ability to cover vast expanse of geographic territory while not moving in any one direction. From the same standpoint as Smithson (taken together with Smithson, Kepes, and Burgess) Lygia Clark, moves along the spectrum of visual perception but in the opposite direction. Clark allows for a movement into the internal space of consciousness itself whereas Smithson and Burgess (and to a degree Kepes) are concerned with rendering the external physical world as a perceptual territory.

The Vargas Regime maintained all Brazilian civil and cultural institutions. In this way the regime attempted to create a sense of linear continuity between the liberal democratic government that preceded them and its own military state, as if the regime was redeeming a national tradition endangered at the hands of its predecessor. Against the history of art co-opted by a corrupt political regime, Oiticica declares that “Only truths matter here, [are] in themselves, without metaphorical transposition”<sup>8</sup>. Oiticica and Clark like most Brazilian citizens were denied the freedom of movement and expression in civil life. In turn they are denying the very possibility of communicating through language as it allows for its co-option by any other motive force. Though we cannot delve into this here in detail, it should also be asked that of contemporary artists that reproduce the strategies of the Neo-Concretists, without explicit political reason or even art historical knowledge: are they preserving and reproducing the conditions of totalitarian dictatorship in and through the work of art at its site of reception?

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7 Ibid.

8 Ibid.

### *The Static Side of Replication.*

Oiticica and Clark’s work seeks a very different destination than Kepes, Smithson, and Burgess. Though both groups entail an instantaneous movement from one place to another, the Neo-Concretists move directly inwards into psychological space and beyond language in favor of direct effect. On the other hand Smithson, Kepes, and Burgess seek to create a psychological language out of the ability to traverse vast expanses of space without moving at all. Adorno points out in his piece *Reflection on Class Consciousness* that in the movement from one place to another it is often “the other, less popular aspect of the dialectic its static side “that goes unnoticed and ignored. The language of transit is the product of a desire to move into a new space of experience. When treating the production of the object as an end in itself, as in the case of Burgess, we see the art object as an evidence that another world already exists and that the art object could be reverse engineered to determine its location. In the case of Kepes and Oiticica, the art object, is a means towards the production of a moment that is constituted socially through the work. This temporary moment is a brief glimpse into the world as a massive social confluence of free production.

In either case the artworks must return back to the world from which they departed. Kepes and the Neo-Concretist moment must give way to the experience of the ever-day while Smithson’s Earth works become acclimated to the landscape around them. Each of these artists create work that is formed by the social situation of the world from which they depart. They are eager to move instantly to new destinations where imagined experiences dominate physical ones. They do not however, account for the return trip.

Adorno continues on to say that

The self movement of the concept, the conceptions of history as a syllogism, as it is only turned into one

by the collusive misunderstanding of the humanities. The law, that according to the Hegelian dialectic, governs the relentlessly destructive unfolding of the ever-new consists in the fact that at every movement the ever-new is also the old lying close at hand. The new does not add itself to the old but remains the old in distress, in its hour of need, as it becomes topical as an immanent contradiction through its act of reflection, its indispensable confrontation with the universal in the old. Thus throughout all its antithetical mediations, history remains one vast analytic proposition. That is the historical essence of the metaphysical doctrine of the identity of subject and object in the Absolute. The system of history, the elevation of the temporal to the totality of meaning, abolishes time and reduces it to an abstract negation.<sup>9</sup>

Adorno explains that categorial abstraction leads to the evacuation of meaning while leaving in its place the husk of the category. He attributes this to the drive to create an “identity of subject and object in the Absolute.”<sup>10</sup> Abstraction becomes a means to efface content bound up in any particular object of reflection. He gives the example of history and its relationship to time. History loses the capacity to depict the way it tasks the present when all of the specific moments that constitute a historical moment are assumed into a single vast continuity. In the body of his writings Adorno describes this relationship of subject and object through categories of identity and non-identity. “Identity” is the collapse of the subject with objective reality, despite its nature. To prematurely collapse subject and object is to settle for the world as we know it.

As an artistic practice, Replication focuses almost exclusively on

9 Adorno, Theodor. *Reflection on Class Theory. Can One Live After Auschwitz?: A Philosophical Reader* ed. Rolf Teideman. Stanford University Press: 2003

10 Ibid.

this ‘less popular aspect of the dialectic’. It collapses the existent world into itself by transferring and superimposing the past onto the present or the geographically distant onto a new location. At first glance it may appear as if this is precisely the premature creation of an identity. However, it is existent objective reality that is collapsed into itself. Meanwhile, the subject or audience for this act as an artwork witnesses this event and is set apart from it.

If the Hegelian dialectic is attractive because it describes the process of overcoming and transformation, then we must focus on what it is that is being overcome. Otherwise, the dialectic’s insistence on ‘constant overcoming’ becomes static in the pace of its movement. Even though a dialectic entails a forward movement, if this movement is constant or consistent then that pace becomes the horizon of the old and the new reduced to the other than the new. Adorno takes this a step farther by saying that “In the New is always the longing for the Old.”<sup>11</sup>

### *The Horizon of Replication*

Replication draws its horizon at the existent world. To replicate is to reproduce the world already produced for ‘us’. By retrieving an object that is located in the past or is geographically remote for replication in a new site in the present, a cyclical relationship is created. If the object of replication is a historical site then the original object and the replica are bound to one another. In other words, an identity is enforced between the past and the present. Initially this appears to be the result of the sheer motive force of the artist and her political intent, but then this gives way as we see the old and the new intermingle and indeed coexist.

The present begins to appear as what Adorno described as the ‘static’ or ‘less popular side of the dialectic’. The transference that Smithson and Burgess had sought to create as a language for

11 Adorno, Theodor. *Aesthetic Theory*. Duluth: University of Minnesota Press. 1998 p. 94



producing art is turned towards the immanently social. Though it loses the immediate goal of the 'truly abstract' it gains a dimension free of any a priori determination. This dimension is everything that does not exist as identified in relationship to everything that does exist. This is the realm of 'non-identity or as Adorno states "freedom postulates the existence of something non-identical"'<sup>12</sup>

It is precisely the experience of non-identity that the artwork-as-replica seeks to produce. It does this by creating an identity between the original object and its replica. Much of the world that exists exists because we expect it to exist as it is. In the text *On the Advantage and Disadvantage of History for Life* Nietzsche explains that

"The stronger the roots of the inmost nature of man are, the more of the past will he appropriate or master; and were one to conceive the most powerful and colossal nature, it would be known by this, that for it there would be no limit at which the historical sense could overgrow and harm it; such a nature would draw its own as well as every alien past wholly into itself and transform it into blood, as it were. What such a nature cannot master it knows how to forget; it no longer exists, the horizon is closed and whole, and nothing can serve as a reminder that beyond this horizon there remain men, passions, doctrines, and purposes. And this is a general law: every living thing can become healthy, strong and fruitful only within a horizon; if it is incapable of drawing a horizon around itself or, on the other hand, too selfish to restrict its vision to the limits of a horizon drawn by another, it will wither away feebly or overhastily to its early demise..."<sup>13</sup>

In the artist's refusal to "restrict its vision to the limits of a horizon drawn by another" must it meet "its early demise"? The more practical way of asking this question is who is the artist working for? In other words, who do artists rely on to prove that the edge

of this horizon is not oblivion after all but the mastery of it?

The artist as Replicator draws a horizon line at the whole of the existent world. The existent world is forced to confront its own image and becomes occupied with itself. In the meanwhile, a void is created beyond that horizon line. It is the future, free of the determination of the world that we know to exist. The past is cast as one massive anachronism. History becomes completely and totally instrumental and no one feels the compulsion to adhere to it lest they too render their being fully instrumental, in front of a growing audience who register the effects of the work. The present becomes a threshold and every object must pass through it in single file. The production of the future is no longer the automatic reproduction of the past but a clear decision based on the merits of each and every object or practice. These are the aims of the Replicators.

### *Replication: Drawing Full Circles*

I will conclude this thesis with the piece *Daedalus: Holding Pattern/Problem*. Both of these projects were sited at MIT's Center for Future Children. The Center for Future Children is MIT's newest research lab which houses the Media Lab, Center for Bits and Atoms, and the Program in Art, Culture, and Technology (formerly the Visual Arts Program) to which I belong.

The Media Lab is an experimental interdisciplinary laboratory that binds together issues in advanced technology, industrial design, and their relationship to the future of society or as the mission statement declares "At the Media Lab, the future is lived, not imagined."<sup>14</sup> The Center for Future Children is itself a statement that drives towards the ever-new. It was designed by Japanese architect Fumihiko Maki in the highest tradition of Modernist tabula rasa architecture where, in the words of Frank Moss, Media Lab President, "The abundance of such spaces

12 Ibid. p. 89

13 Nietzsche, Friedrich. *On the Advantage and Disadvantage of History for Life*. Indianapolis: Hackett Publishing Co. 1980 p. 17

14 Mission statement Media Lab <<http://www.media.mit.edu/about/mission-history>>

in the new building will be a perfect setting for expanding our research agenda into exciting new realms.”<sup>15</sup> This was affirmed by MIT president Susan Hockfield when she states that “We believe that the work under way at the Media Lab is integral to MIT’s mission, and closely ties in with our focus on energy, health sciences and technological innovation...”<sup>16</sup> These statements are completely in line with the principles of the site-less institute laid out by President Gordon Brown in 1958.

Now, nearly 52 years later the Center of Advanced Visual Studies is no longer on the periphery of the institute but located at the center of its interdisciplinary initiative in the form of the new Program for Art, Culture, and Technology (ACT). To paraphrase Director Ute Meta Bauer, ‘the ACT should function like every other lab at MIT as a place of knowledge production’. However, as I have laid out above, the type of knowledge produced through artistic research is often antithetical to technical knowledge concerned exclusively with innovation and reproduction. From the standpoint of technical production artistic knowledge appears as non-knowledge. This was reiterated in nearly all of my interdisciplinary collaborative projects executed at MIT over two years. This is not to imply that one form of practice is superior to the other. Rather it is to say that this adversity and friction can generate entirely new forms of exchange or experience within an institution.

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15      Maki building launches new era for MIT Media Lab <<http://web.mit.edu/newsoffice/2006/media-lab-building.html>>. September 5.

16      Ibid.

## ***Daedalus: Holding Pattern/Problem***

**Haseeb Ahmed**  
**MIT, Cambridge, MA. 2010**

### ***Replication as End Game***

On the occasion of the inauguration of the Center for Advanced Visual Studies I was asked represent the ACT Program by creating a site specific installation in the west lobby reserved as a gallery space for the ACT to celebrate the newest of the new in knowledge production, I decided to point towards the old as the formerly new. I sought to create a register for the seemingly new which was presented at the event as unrelentingly new.

I began to work with another part of the institution, the MIT Museum, responsible for preserving the collective cultural and technical memory of the entire institute. Together with Curator of Science Deborah Douglas, I located artifacts in the MIT Museum archive that were extremely relevant to my previous work: a wing from the human-powered Monarch-B aircraft (1985) and a wind

tunnel model of the city of Toledo, OH, created in 1978. On a superficial level these objects immediately resonated because of previous work in the Wright Brothers Wind Tunnel from which they originated and because of the serendipitous fact that I was born and raised in the small city of Toledo.

When I met with the Curator Douglas, she explained that in the field of the history of technology these artifacts were products of a kind of 'research at the edge'. They were produced as forms of inquiry into the limits of physical reality and the ability to interface with it. The windtunnel model of the city of Toledo was produced along with nearly a dozen other cities to test the effects of ground wind conditions on steel and glass high-rise buildings in high-wind regions. This study was initiated by the catastrophic failure of the design of the Hancock Building in Boston, MA. The Hancock building was positioned in relation to wind currents along the Charles River such that solid eight foot by four foot panes of glass began to resonate, loosen, and eventually fall to the city streets below. After this event extensive studies were carried out of buildings and cities which had similar wind conditions and had plans for large modernist structures at their centers.

While the wind tunnel city models represented a massive yet subtle distribution of force, the Daedalus project, of which the Monarch B plane was one iteration, has a much deeper history. The Daedalus Project refers directly to the ancient Greek mythological character Daedalus. Daedalus represented the drive towards mechanical ingenuity and is said to have created the labyrinth in which the half man, half bull Minotaur was imprisoned. The minotaur is the illegitimate son of King Minos II's wife Pasiphaë and a sacred bull sent from the heavens by the god Zeus. After constructing the labyrinth in which the Minotaur was to be sealed away, Daedalus was ordered to produce a mechanical bull for Pasiphaë. However, Daedalus is best known for his successful escape from King Minos II together with his son Icarus. As the story goes, Daedalus and Icarus constructed a set of wings fashioned from feathers and wax to fly from the

Island of Crete to Santorini. Icarus famously flew too close to the sun, melted his wings and fell to his death below, while Daedalus safely reached the shores of what is now the Isle of Santorini. This story is the earliest record of a mechanical construction which enabled human-powered flight. However, until 1985 at MIT, no one had achieved this goal.

By naming the project Daedalus, MIT positioned itself as bringing the unfulfilled project of human-powered flight to conclusion. Through the gesture of researchers at the MIT Aeronautics and Astronautics Department, the project of human-powered flight was constituted as one that had persisted for over 2000 years. However this monumental accomplishment was indeed an end. After the successful flight from Crete to Santorini in 1985 the mechanical secrets of human-powered flight did not have any kind of future worthy of the scale of a 'project of humanity'.

For my installation at MIT's Center for Future Children I brought these objects out of the archive, highly deteriorated and yellowed and introduced them to the future of research. After cutting a 'black hole' in the ceiling of the building on the day of its inauguration the wing of the Monarch B together with the windtunnel model of the city of Toledo and a drogue parachute used to slow down aircraft when landing on an aircraft carrier came to hover over the Media Lab and its vision of the future.

Technical research is focused exclusively on the future, and this is explicitly the case at that MIT Media Lab. By reintroducing artifacts of once-ground-breaking research into a space focused on linear-forward moving production, a closed loop is created between the past and present. MIT as a technical institute is made to confront its own image. It must confront its own reason for existence as a social institution when all knowledge produced there is proprietary.







Haseeb Ahmed  
Daedalus: Holding Pattern/Problem  
2010



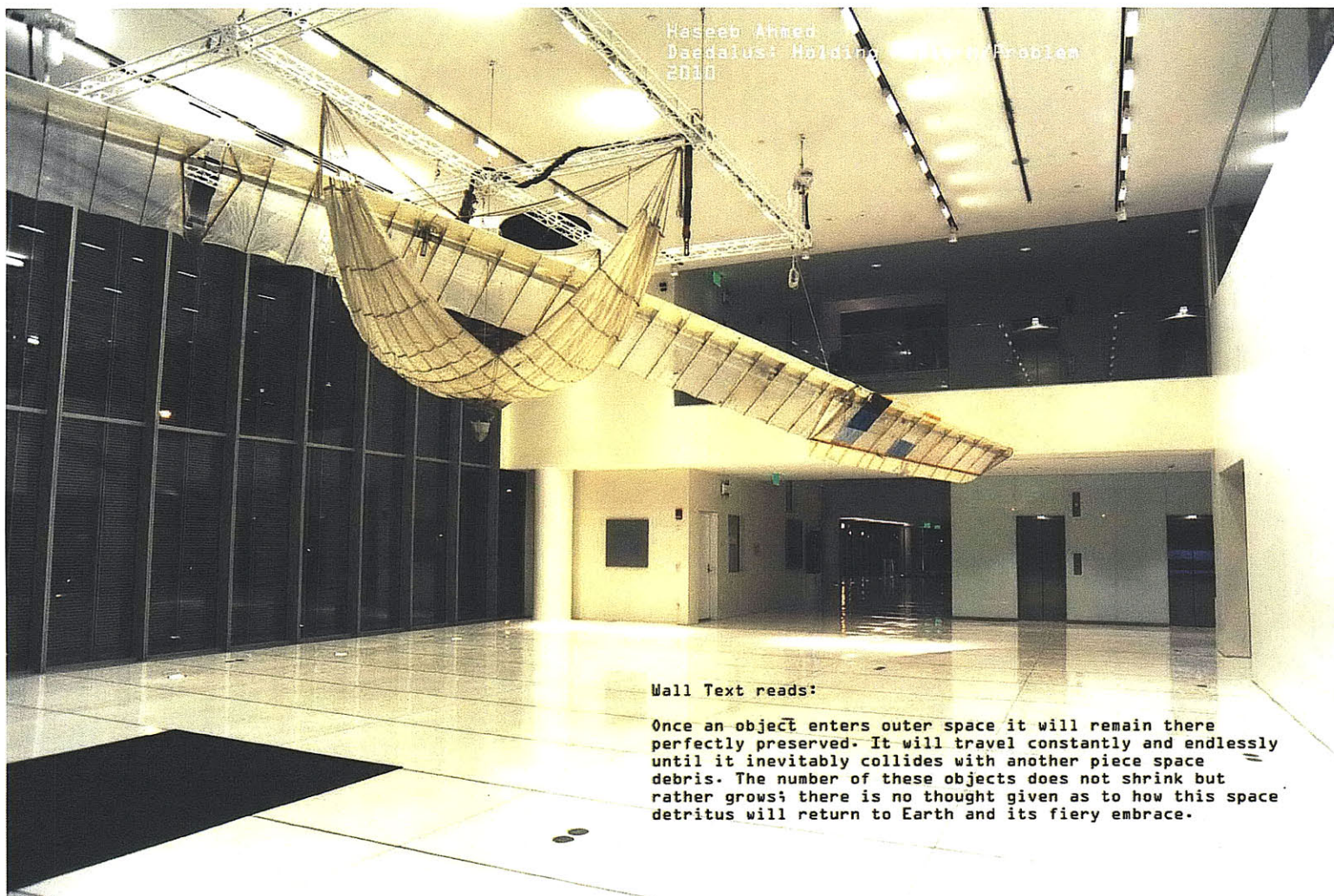


Haseeb Ahmed  
Daedalus: Holding Pattern/Problem  
2010



David Lauder  
David Lauder: Holding Pattern/Problem  
2010







## **Conclusion:**

### **The Social Destruction of Fact through Replication as Art**

Replication today connotes endless proliferation of quantity derived from a single prototype. However, the root of replication is *plico* which means to fold, to lay or wind together, to fold up, or double up. This is significant because it insists that a multitude is the whole.

The artistic practice of Replication is one of retrieval. Material geographically or historically distant is superimposed on a new site in the present. In this way, Replication creates a register for continuity and change and the standpoint from which to interrogate the social situation of the present. The social destruction of fact through replication is not purely a destructive practice. By effacing anonymous production, it leaves a thoroughly socialized body of knowledge, an object of knowledge, and the people who are prepared to produce that object once again in its stead.

#### ***What is Replication in the Sciences?***

The basis of the scientific method is reproducibility. Scientific fact is only fact if it can be reproduced at any time in any laboratory in the world. A laboratory strives to be the same place as any other laboratory, timeless; a non-site. It is not only the end result that needs to be identical but also the process by which it was arrived at.

#### ***What is Replication in Art?***

Replication turns the world into a stereoscopic image: two different images of the same thing are combined into one when viewed through a modified lens. The viewpoint of the present remains fixed and becomes a centripetal point where the replica and distant original merge into a single image.



The practice of Replication creates a continuity between the past and the present, setting the future out of the bounds of the artwork and experience. It is not the mere reproduction of an object but mobilizes social and technological infrastructures as a process.

Replication creates an object and the audience for that object at the same time. By doing the work of Replication we are freed from compulsively reproducing the world as we know it to exist.

### *Replication as site for Art and Science?*

The strategy of Replication is derived from the role of reproducibility in the scientific method as I experienced it in the labs and archives at MIT. These labs, like museums rely heavily upon an anonymity in their character so they might produce a knowledge that is ready for appropriation by any other lab or acquired by another museum. When I located these labs as sites for artwork, their anonymity was effaced and their purpose interrupted.

Instead of technical, reproducible knowledge, the sites produced an object of non-knowledge. In turn, the artwork was obliged to act as a stop-gap against the complete liquidation of this place that it too came to rely upon as its site of reception. By creating something which is heterogeneous, which does not offer itself for consensus in a laboratory, we are engaging in the social destruction of fact, which in the same moment, in the context of art, is the creation of art.

By translating the reflective space of the gallery into the laboratory, I use the gallery as a laboratory and vice versa. In the context of science, art is the transformation of knowledge into non-knowledge. By using a gallery as the site of Replication it too is transformed- it is no longer a neutral space for the display of indifferent objects.

### *Can we live off of the Labor of Others Alone?*

The labor of replication is directed entirely at retrieving sites that are geographically and historically remote. By imposing the horizon of replication at the existent world, the practice insists that 'the world has already been made!'

Today, automatic technological development appears to be the same thing as social progress and its sole heir. However, we know that it is not a matter of distribution alone that delays utopia. By replicating historical material the past is superimposed onto the present. The replica and the original distant in time and are identical. However, a non-identity still remains, and it is the non-identity which points towards a freedom beyond the world we know to exist.





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